1959

Gleanings in BEE CULTURE

May 1959

Library

s
d Ital-
direct
Ship-
, ex-
ment.
ueens.

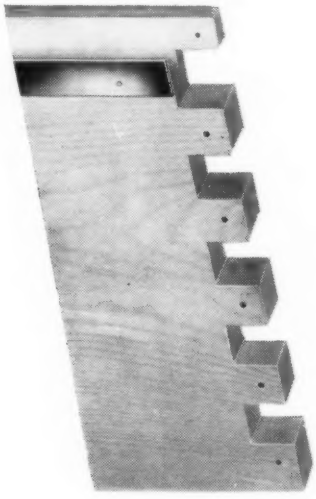
.....199
.....252
.....251
.....194
.....253
.....255
.....243
.....251
.....199
.....251
.....251
.....255
.....243
.....255
.....195
.....248
.....194
.....255
e back cover
.....242
.....243
.....253
.....245
.....196
back cover
.....250
.....198
.....252
.....196
.....199
.....253
.....250
.....253
.....250
.....252
.....196
.....198
.....245
.....195
.....249
EE CULTURE

Join the Switch to

EASIER ASSEMBLY

By using DADANT Hive Bodies with Bored Dovetails and Pre-punched V-shaped Metal Frame Rests.

Customers report complete assembly at the astonishing rate of one every 8 minutes!



Compare this with the extra time required to nail old style bodies.

We invite you to TRY Dadant Hive Bodies and Supers for "Quick and Easy" assembly. Remember they are Rot-proofed for added protection at no extra cost.

Available at all DADANT DEALERS or at any of our 7 distribution points.

DADANT & SONS, Inc.

Hamilton, Illinois

DADANT BRANCHES

180-200 CANISTEO HORNELL, NEW YORK	HIGHWAY 41, SOUTH HAHIRA, GEORGIA	1010 W. AUSTIN PARIS, TEXAS
722 W. O'CONNELL ST. WATERTOWN, WISCONSIN	1929 E. FOURTH ST. SIOUX CITY, IOWA	STEPHENSON AVE. AT 14th LYNCHBURG, VIRGINIA

Gleanings in Bee Culture

May, 1959 Vol. 87, No. 5

CONTENTS

87 years continuous publication by the same organization.

Monthly Honey Report	Walter Barth	261
Beekeepers Arise	Robert H. Rusher	263
It's an Idea	Milton H. Stricker	265
Pollination on the University Farms	Dr. Edwin J. Anderson	266
One Thousand Packages from the South	J. A. Tremblay	270
Over Sized Pine Cone	Reid L. Witter	273
Pesticides—A Broader View	David M. Noetzel	274
A Two Queen Colony That Pays	C. L. Jones	276
Comb Honey Equipment	Carl E. Killion	278
When Spring Has "Sprung"	Milton H. Stricker	280
Unusual Comb Honey Season	Gustave Telschow	282
Smoker Fuel	Leo R. Hubbard	283
Our Cover		283
News Reel		284
Research Review	Dr. Roger A. Morse	286
From Foreign Lands	Erika Barth	287
Editorials		288
Live and Learn	Propolis Pete	290
Let's Talk about Honey Plants	Harvey B. Lovell	291
Spring Tonic	Mrs. Benj. Nielsen	293
Who's Who in Apiculture		294
The Mystery of Royal Jelly	A. B. Kennerly	296
Does Anyone Know?	Charles J. Koover	297
A Talk to Beekeepers	M. J. Deyell	299
News and Events		300
Obituary		301

Subscription Rates: United States, Canada, Pan American countries, and Spain, one year, $2.00; two years, $3.50; three years, $5.00. Single copy, 20¢. Other countries, 50¢ per year additional for postage. Published monthly. Discontinuance: Subscriptions stopped on expiration. No subscriber will be run into debt by us for this journal. Change of Address: Give your old address as well as the new and write the name to which the journal has heretofore been addressed. Remittance should be sent by post office money order, bank draft, express money order or check. Contributions to Gleanings columns solicited. Stamps should be enclosed to insure return of manuscript to author if not printed. Advertising Rates: Advertising rates and conditions will be sent on request. Results from advertising in this journal are remarkably satisfactory. Advertisers' Reliability: While the publishers do not guarantee advertisements in this journal they use utmost diligence to establish in advance the reliability of every advertiser using space in this journal.

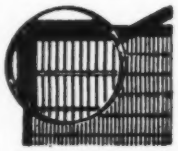
Opinions expressed by the writers in these columns are not necessarily the opinions of the editors.

POSTMASTER: Send Form 3579 to 623 West Liberty Street, Medina, Ohio.

Second Class Postage paid at Medina, Ohio.

The A. I. Root Company, Publishers, Medina, Ohio
M. J. Deyell, Editor — John Root, Managing Editor
Huber H. Root, Associate Editor — Walter Barth, Field Editor
Roger A. Morse, Research Editor

Chrysler's Electric Welded All-Steel Queen Excluder



The only worthwhile Queen Excluder on the market

- Accurate spacing
- Allows maximum bee passage
- Better ventilation
- More honey production
- No wood. No burr combs
- No sharp edges to injure bees
- So durably made that it is permanently queen excluding and will last a life time.

We manufacture a full line of Bee Supplies. Order from our dealers or direct from our factory. Canadian-made goods are cheaper. No duty. Send for our price list. Always in the market for beeswax. Cash or trade.

W. A. Chrysler & Son
Chatham - Ontario - Canada

U. S. Savings Bonds come in all sizes . . . . . and grow bigger every year.

For

Root QUALITY

Goods in MICHIGAN
It's
Prairie View Honey Co.
2 Blocks from the Expressway
Now Open to All Points
North and West
"Everything for the Beekeeper"
and plenty of FREE parking
for CASH-and-CARRY
CUSTOMERS
HONEY and BEESWAX
bought or traded
for supplies
Mail Orders Handled Promptly
PRAIRIE VIEW HONEY CO.
12303 12th St., Detroit 6, Mich.

A
COMPLETE SERVICE
for
New York State
and Eastern Beekeepers
from
M. R. CARY CORPORATION
(Formerly A. I. Root Co., of Syracuse)
Syracuse, N. Y.

* **Root QUALITY Bee Supplies to help you get more honey**
* **A complete line of Glass and Tin Containers**
* **A ready market for your Honey and Beeswax at top prices**
* **Rendering service for your old combs and cappings**

A postal card request will bring you Root's complete catalog and our container price list. Orders shipped promptly. Reasonable prices. Send sample of honey, advising how much you have. Shipping tags for honey, wax, combs and cappings sent on request.

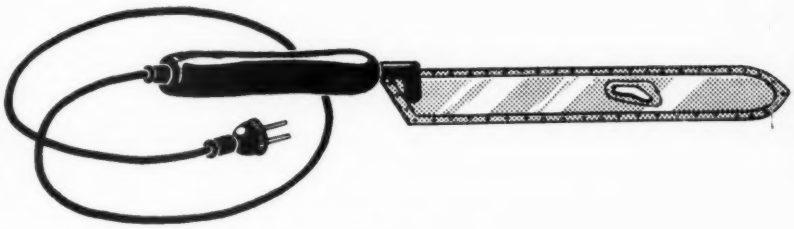
M. R. CARY CORPORATION

219 Washington Square
at 1612 N. Salina Street
Syracuse 8, New York

Meet the Demand
for
COMB HONEY
U S E
LOTZ SECTIONS

Top Quality
Minimum Breakage
Accurate Dimensions
Smooth Dovetails
Clear Bright Finish
also
Complete Line
of
Bee Supplies
and
Containers

August Lotz Co.
Boyd, Wisconsin



KELLEY'S THERMOSTAT KNIFE

Here is a real SUPER MARKET value. Gets hot in 30 seconds and stays the right temperature — adjustable heat control — guaranteed 2 years but should last 20. Read what Roy King, Fairmont, Nebraska says: "UNCAPPED 4,000 OF THE 60 POUND CANS OF HONEY WITH YOUR NEW KNIFE AND IT IS STILL IN PERFECT CONDITION — IT IS THE BEST WE EVER USED — WE ESPECIALLY LIKE THE THERMOSTAT NEAR THE POINT WHERE IT IS NEEDED."

Cat. No. 185 Kelley's Thermostat Knife, Ship. Wt. 2 lbs. Each $12.00.

Write for our big SUPER MARKET catalog containing 64 pages listing many items not found in other catalogs, all prices the lowest but the quality the highest.

WALTER T. KELLEY CO. CLARKSON, KENTUCKY

PACKAGE BEES QUEENS

"ITALIANS"

Wilbanks offers you tested stock proven for honey producing ability and easy handling. Satisfied customers through the years assure you of the greatest value here.

	1-9	10-49	50-up
2-lb. pkg. with young laying queen	$4.35	$4.10	$4.00
3-lb. pkg. with young laying queen	5.35	5.10	5.00
4-lb. pkg. with young laying queen	6.45	6.10	6.00
Extra Queens	1.50	1.40	1.30

Shipments by Express, Parcel Post, or your Truck
Quality Does Not Cost — It Pays

THE WILBANKS APIARIES Claxton, Georgia

SMOKE — SMOKE — SMOKE

Taylor's AEROSOL....

HIVE-BOMB

with finger-tip convenience
no heat—no sparks—no fire

$1.29 plus freight at better dealers and in their catalogs

The Push-Button Bee Smoker
A PUFF'S ENOUGH — FOR BEST CONTROL
(R) STEWART TAYLOR, Camargo, Ill.

F. W. Jones & Son, Ltd., Bedford, Que., Can.

CANADA'S LARGEST BEEKEEPER SUPPLY MANUFACTURERS AND EXPORTERS
— Write for Catalog —
U. S. Shipments — Swanton, Vt.

DO YOU KNOW?

We Render Cappings, Old Combs, and Slum-gum.

Rates are reasonable with a good job assured. Extra wax secured over ordinary beekeeper methods will often cover charges. See page 11 of our 1958 catalog for complete information. We are always in the market for beeswax, cash, trade, or to be worked into Bee Comb Foundation.

A. G. Woodman Co. **Grand Rapids 4, Michigan**

OUR MOTTO

" Everything for the Beekeeper "

* Quality Bee Supplies * Labor Saving Devices
* Rendering Plant
* Market for your Honey * Market for your Beeswax

Drop us a card so that you will be sure and get one of our new 1959 Bee Supply Catalogs.

Wally's Bee Enterprise, Inc.

1909 East 4th Street **Sioux City, Iowa**

PROTECT BOTTOM BOARDS
from rot and termites

Carbolineum adds years to the life of wood — prevents decay and termite attack.
Used by leading commercial and non-commercial beekeepers. Especially recommended for hives taken to the field and set on ground.
For full information write.

CARBOLINEUM WOOD PRESERVING CO.
Dept. G, Milwaukee 9, Wis.

STOLLER'S *Frame Spacers*

The Finest Thing Offered Beekeepers

From coast to coast, reports come in, of the merits these spacers perform.

STOLLER HONEY FARMS
LATTY, OHIO

Use the MASTER Electric Uncapping Knife.
Heavy duty thermostat. Quick adjustment.
Used by uncappers all over the world.
Price $15.00 **See your Dealer**
HUTCHISON MFG. CO.
2904 Colorado Ave. Santa Monica, Calif.

WALTE

HERE
ment
honey ad
vertiseme
azines is
plug a sy
tisement.
ness of t
readers a
March 19
approach

Some
favorable
as a who
last mon
close ope
supported
retail sto
packers.
these pric
ing letter

Dear M
You
me enti
We
$1.00,
crop we
three to
big hol

Hon
18¢. Th
fore we
We who
do it fo

Hon
that wa
It sells

The
alistic
the cost

Monthly HONEY Report

WALTER BARTH — Field Editor

HERE AGAIN is another advertisement to make us realize that more honey advertising is needed. This advertisement appearing in leading magazines is using our own honeybee to plug a syrup. Sure is a clever advertisement. . . .and it points out the weakness of the honey industry. (Gleanings readers are referred to page 168 of the March 1959 Gleanings for the industry approach to this subject).

Some beekeepers are lucky to secure favorable honey prices but the picture as a whole, as reported in this column last month, shows prices based on a close operating margin. This report is supported by honey prices appearing in retail stores on honey packed by large packers. Some beekeepers disagree with these prices as indicated in the following letter from a Vermont beekeeper:

March 15, 1959

Dear Mr. Barth:

Your March market report discourages me entirely.

We are selling 2½ pound jars for $1.00, 5 pound jars for $1.75. Our own crop went long ago and we have bought three tons of outside honey and made a big hole in that.

Honey plus freight costs us at least 18¢. That makes 5 pounds cost us 90¢ before we heat, strain, bottle, and label. We wholesale at $1.30 and feel foolish to do it for that.

Honey has moved well and people that want it are willing to pay the price. It sells better every year.

The prices you report are just not realistic and do not go along at all with the cost of things. At these prices I would not call beekeeping a business but would consider it more in the nature of an affliction.

Hope you can make some better reports in the future. Either we need a new market reporter or we will have to consider that 95% of the nation's beekeepers are feeble minded. I hope that neither case is right.

Very truly yours,
Robert M. Mead

We are most anxious to report favorable honey prices but to stretch the point for a bright picture would be unrealistic. Our reporters indicate a wide variety with some as low as $1.25. Fortunately, since last month the general honey price picture has gone up an average of five cents on a five pound jar. Many beekeepers get much more, it is true, but this is not the picture on the supermarket shelves where the bulk of honey is sold. Since the major packers dominate this market the bulk of the nation's honey is at their prices.

It may interest readers to know that we receive reports of 5 pounds of honey retailing at $2.25. A fine price but still unrealistic on the basis of the national honey price picture. Just as unrealistic are the reports of 5 pound honey sales at $1.15 to $1.25. We have observed that at times the honey priced so low is of poor quality and not comarable with good honey, but not always so. Why beekeepers insist on giving their honey away is still a mystery that is repeated every season. The prices quoted in this column represent the average situation as reported by the majority of our reporters, and which I in turn, check with wholesalers in order to keep the picture realistic. The use of honey as a loss leader as we reported last month doesn't help the price picture in any area.

Here is the present average retail honey price picture:

Size of jar	Price
8 oz.	22¢
1 lb.	37¢
2 lb.	69¢
5 lb.	$1.49

THE DANIELS APIARIES STRAIN OF LIGHT COLORED (YELLOW) ITALIANS — FOR TWO DECADES THEY HAVE ADVERTISED THEMSELVES IN APIARIES AROUND THE WORLD — (they are a line breed strain with a respected past and a bright future.) Good overweight — Choice queens — Immediate shipment.

Quantity	1-3	4-25	25-up
2 lb. package & queen	$4.50	$4.25	$4.00
3 lb. package & queen	5.50	5.25	5.00
4 lb. package & queen	6.50	6.25	6.00
5 lb. package & queen	7.50	7.25	7.00
Untested queens	1.50	1.35	1.25

Prices U. S. and Canada — queens clipped and air postpaid — package bees Express collect or postage extra. Queenless packages subtract $1.25 each.

Select Tested Queens $10.00 each. Export $11.00 air postpaid to all countries. Select untested queens $2.00 each after June 1st only.

PLASTIC QUEEN CELL CUPS—these are the original Plastic Queen Cell Cups. They have brought at least a 30% reduction in cost of queen cells and improved the quality of queens. Queen breeders and Royal Jelly producers have and are buying them so that we are now producing them by the hundreds of thousands.

Prices — POSTPAID anywhere in U. S. and Canada (Canadian duty collected your Post Office). Stock Queen Cell Cups will be transparent Amber:

100 Plastic Cell Cups . . . $ 2.00	2000 Plastic Cell Cups . . . $20.00
200 Plastic Cell Cups . . . 3.50	3000 Plastic Cell Cups . . . 27.00
500 Plastic Cell Cups . . . 7.50	5000 Plastic Cell Cups . . . 40.00
1000 Plastic Cell Cups . . . 12.50	

WE ARE SOLE WORLD DISTRIBUTORS
FOR THESE PLASTIC QUEEN CELL CUPS

Export Prices — We will send postpaid by surface mail (import duties, if any, paid at your Post Office) at $10.00 per 500 cups and each additional 500 cups $5.00. (Desire one distributor in each country.)

SPECIAL PRODUCTS SECTION

Royal Jelly capsuls, 50 mg. size packed 15 caps per bottle, price export, jobber and beekeeper, $1.60 postpaid.

Pollen Capsuls (a promising new health food supplement) per bottle of 15 capsuls—Retail postpaid, $4.75 each, 25% discount to wholesalers and beekeepers.

Pollen and Royal Jelly Capsuls, per bottle of 15 capsuls, $6.25 postpaid, 25% discount to wholesalers and beekeepers.

SUGAR FOR BEE FEED — HARVEST MORE HONEY — PRODUCE QUEENS AND PACKAGE BEES CHEAPER — Write for details.

To manufacturers and research workers, domestic or export, we offer the following bulk products: 1. Pure Royal Jelly. 2. Plant Pollen. 3. Bee Larvae. Write for details. Notice—All the products in this section produced and packaged to the exacting standards of the Daniels Apiaries Bee Culture Laboratory and all these products are the natural products, not adulterated or synthesized in any way. Every precaution is taken to preserve the efficacy of these products. As far as we know we are the only concern in the world to stock all of these products on a year round basis.

R. C. DANIELS AND COMPANY

Picayune, Mississippi, U.S.A.

BE

Last yea
States h
by the fo
$4,505,0
know w
to preve
future y

AT THE
is selli
lower tha
ing to the
ricultural
Agricultur
same time
er pays fo
We pro
265,000,0
in the U

BEEKEEPERS ARISE!

Last year the beekeepers of the United States had their bank accounts rifled by the forces of economics to the tune of $4,505,000. If you would like to know what we as beekeepers can do to prevent this from happening in future years—read on.

ROBERT H. RUSHER
Hyannis, Cape Cod, Mass.

AT THE PRESENT time, our honey is selling at 1.4 cents per pound lower than it was a year ago, according to the January 1959 issue of "Agricultural Prices", published by the Agricultural Marketing Service. At the same time, the prices that the beekeeper pays for commodities have risen.

We produce in the neighborhood of 265,000,000 pounds of honey a year in the United States. This fluctuates from year to year, but we might almost say that our honey production is inelastic. If we stop to do a little arithmetic, we will find that on the basis of the 1.4 cents decline in the price of honey, the forces of economics have rifled the beekeepers' pocketbooks to the tune of $3,710,000 for 1958. But, that is not the complete picture. According to the same publication, the price index that indicates the relative

value of prices paid for commodities, interest, taxes, and wages has risen 2.48 per cent. If the price of honey had followed this trend, honey at wholesale in 60 pound containers would bring today 13.7 cents a pound against the actual of 12 cents. Multiply this difference by the amount of honey produced, and you arrive at $4,505,000.00 representing the total loss in purchasing power that was sustained by the beekeepers of the United States in 1958.

In July of 1953, there appeared in Gleanings in Bee Culture, on page 407 an article entitled "The Honey Industry—Now or Never" by this writer. There set forth was the preposterous suggestion that the beekeepers of this nation, each and every one, submit to the American Honey Institute one cent a pound for every pound of honey produced. That would have meant that over the past five years, the American Honey Institute would have had at its disposal something like 7½ million dollars. That money could have bought a lot of full-page color advertisement, it could have bought radio or television time. It could have made every man, woman, and child in the United States conscious of the wonderful values inherent in honey. It could have reached millions of people who are ignorant of those facts today, and therefore do not eat honey.

Honey will command a price if it is properly promoted. The writer has sold honey that retailed at 65¢ a pound and people come back for more. Might I add, parenthetically, that according to the U. S. Honey Grading System, it would grade as "dark amber" but people buy it because they like it, and because they have never been told that the lighter the honey, the better it is!

German Consumption

If we could bring the people of this country to the same level of honey consumption that the people that live in West Germany have, we would be scrambling for honey. Consider that the total population of West Germany is not in excess of 56,000,000, yet we bemoan the fact that they are not buying our honey, and therefore there is a glut of honey. If we approached their consumption per capita, our honey would command a price. Our honey jobbers would be bidding against each other among the beekeepers to get honey to fill their orders. At the present time, we hear a little comment on the fact that although the wholesale price of honey has dropped 1.4¢ a pound, the retail price of honey has dropped but 0.1¢ a pound. The jobbers get the difference. We must stop to consider that the jobbers are only getting a fair return for a definite risk that they are taking. They are in danger of being stuck with the honey they buy for the reason that the American public is not honey-conscious and does not demand honey in a quantity sufficient to keep it moving off the grocers' shelves. We cannot expect the Government to continue to supply the beekeepers with a stop-gap crutch any more than we expect them to make jelly or corn-syrup support commodities. This will only raise our taxes. We cannot wait for the jobbers to promote honey for they only buy and sell it. There is only one place we can logically expect real honey promotion to originate. That is with the people whose whole life it is—the beekeepers who produce it. Until we have reached that point where the beekeepers are willing to reach down into their pockets and give the American Honey Institute more than a disgracefully token amount of ONE HUNDREDTH OF ONE CENT per pound of honey produced, I predict our honey picture will blacken.

National Advertising

I am neither a business man nor an economist, but the facts are there. Honey is not reaching the public because honey is not nationally advertised. Advertising on a national scale must pay off or the millions that are spent on it annually would find other channels. But this stands out—The laws of supply and demand have taken from the beekeepers, whether they like it or not, over $4,000,000 in 1958. Doesn't it seem good sense to have spent half that much on a real promotion of honey? We must awake to the fact that spending a reasonably adequate percentage of our gross income on solid promotion is more necessary to a healthy honey industry than hive bodies and trucks and hybrid queens. We can produce tons of honey with the latter, but without the former, we face decimation of the honey industry as one

producer after another is forced to the wall by the further spread of declining prices against rising costs.

The American Honey Institute

The reason I have kept stressing the American Honey Institute is the fact that it is headed by a woman. After all, a great portion of the impulse buying in the country is done by women. Mrs. Grace has never lacked for an idea to promote honey. The only thing she has lacked is an adequate budget. She has wrought miracles on a pittance of in the neighborhood of $25,000 a year. Until we are willing to back her up to the point where she doesn't have to go out to beg the corn-flake people, the pancake-mix people, and who else, to put honey in as a "tag" to their own multi-thousand dollar advertisements, we are going to get just what we have paid for—a poor consumption ratio of honey. I do not doubt for one moment that Mrs. Grace will deliver the goods, ten-fold, when she is given the wherewithal to do it.

One Promotion Organization

The American Beekeepers' Federation is also setting itself the task of promoting honey. The Federation doubtless has a very definite place and mission in the beekeeping industry. But, I think "A house divided against itself must fall". I feel that where our support belongs is with the American Honey Institute; an organization that has been in existence for over a quarter of a century; an organization that is headed by a woman who has the gift of making women want to buy; an organization that is dedicated solely to honey promotion, to the extent that it has been able to promote honey advertisements FOR NOTHING.

If we get behind our product, if we believe in our product, we can see the day when honey will retail for 50¢ a pound, and the producer will get half or more of that amount. We have all heard how a good churchman tithes. We all know that a good business man allocates a reasonably adequate percentage of his gross income to paid advertisements. I submit that there is one way and only one way to bring honey to the point where it commands a fair share of the consumers' dollar, so that when prices are rising, the price of honey will rise with them, rather than decline in the face of a growing market. That one way is paid honey promotion. Twenty-five thousand dollars a year is a contemptible disgrace. The corn-syrup people have spent more than that in ONE MONTH to extol a product that is vastly inferior to honey on advertising that gives a sly dig at honey. Are we going to take it lying down?

Check-off Plan

I further submit that one cent a can, as recommended by the promoters of the Check-off Plan, is disastrously inadequate. We are faced with these alternatives—pay one cent a pound a year, or economics will take upwards of two cents a pound per year from the beekeepers' pockets, without so much as a by-your-leave, as it did in 1958. The future graph of the price of honey lies in your hands, whether you operate three colonies or 3,000. Do we wait until the price goes to 7¢ or 5¢, or do we act now, while we still have a chance, however difficult?

IT'S AN IDEA

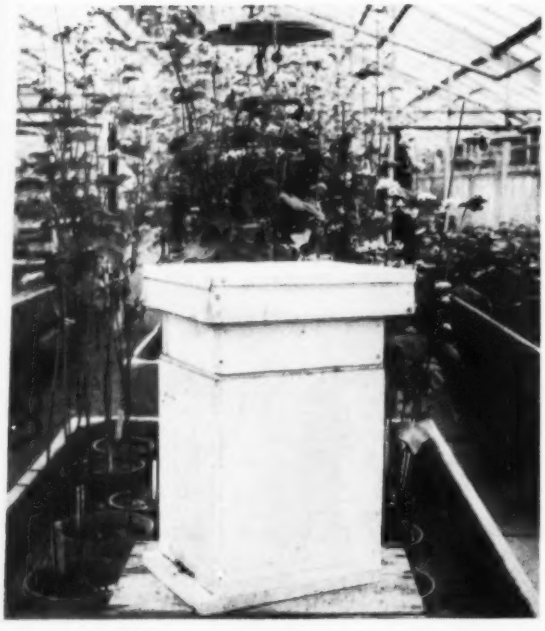
MILTON H. STRICKER
Stockton, New Jersey

THIS LITTLE GADGET is known in New Jersey as the Robert Spicer Wedge. A small wedge shaped piece of wood that is forced between the supers to inspect for queen cells saves time and labor.

Pollination on the University Farms

DR. EDWIN J. ANDERSON
Pennsylvania State University
University Park, Pennsylvania

Pollinating plants in a greenhouse is not as simple as it might seem. One problem arises when many bees are lost while trying to fly through the glass roof.



A colony of bees placed in a greenhouse to cross pollinate new and imported varieties of buckwheat.

THE POLLINATION program on the University farms has been carried out along two lines, the first and most interesting part of the two including the several research projects having to do with the pollination of farm crops by honeybees and bumblebees. Research in this field included such crops as red clover, lima beans, and muskmelons. The pollination of crown vetch was also studied but research with this plant was done on a privately owned farm five miles west of the University.

The second phase of this work consisted of providing bees each year to pollinate the various farm crops that needed this service. The crops polli-

nated were
clover, cab
wheat.

The resu
pollination
American
May 1944,
ed, this w
can and d
Pennsylvan
work the
the colonie
fields in ra
to insure a
blossoms.
required fo
not determ
tions, not
in large nu

A colony of bees in a plastic screen cage used to pollinate new varieties of ladino clover.

nated were apples, red clover, ladino clover, cabbage, cucumbers, and buckwheat.

The results observed in the red clover pollination project were reported in The American Bee Journal, Vol. 84, No. 5, May 1944, pp. 156-157. Briefly reviewed, this work indicated that honeybees can and do pollinate red clover under Pennsylvania conditions. The bees work the red clover reluctantly, hence the colonies have to be placed in the fields in rather large numbers in order to insure a good working force on the blossoms. The exact number per acre required for maximum pollination was not determined. Under certain conditions, not fully understood, honeybees in large numbers were observed working red clover blossoms. This favorable activity which was probably due to a heavy nectar flow lasted at most only a few days and was observed only on two occasions over the period of five years that this study was carried out.

It was also observed that at times when other nectar producing plants such as alsike or sweet clover were blooming at the same time as the red clover, the bees would readily desert or fly over the red clover and work on the other plants. The second cutting of red clover, however, normally blooms at a time when there are few if any other good nectar producing plants in bloom. For this reason, a heavier seed set was obtained from the second than from the first cutting of red clover.

Muskmelons in greenhouse pollinated by honeybees.

Drier weather at the time of the second crop generally resulted in less vegetative growth and may have been a factor causing increased nectar secretion and shorter corallas, permitting the bees to reach some of the nectar.

Lima Bean Pollination

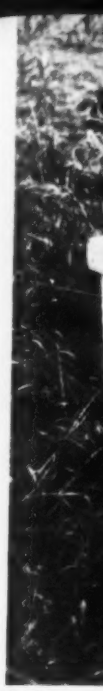
In the study of lima bean pollination, bean plants were caged with and without honeybees. The plants in both cages set beans in about equal numbers indicating that lima bean blossoms are self-fertile. The cages with bees set more beans during the early blooming period and the beans were larger. The cages without bees set slightly more beans per stalk but the beans varied more in size than those from the cage with bees. There were more small beans when harvested in the cages without honeybees. Six fields of beans were observed under natural conditions in the Lykens Valley. These fields were checked to find out whether or not honeybees were present on the blossoms when bees were not especially provided for this purpose. All six fields contained an abundance of honeybees even though only one apiary of six colonies could be found near any of the fields. No other nectar producing plants of importance were observed in bloom in the vicinity of the beans.

Pollination of Muskmelons

Honeybees were requested in the spring of 1953 to pollinate two varieties of muskmelons in a greenhouse. Both varieties were growing in the same section of the greenhouse, thus providing a problem since the melons were newly developed varieties and each variety had to be kept pure. After some consideration, it was decided to cover all the plants of one variety with a light grade of cheesecloth. A small colony of bees was then placed under the cheesecloth. A second colony was left in the open greenhouse to pollinate the other variety of melons. The cloth used to cover the one variety formed a large cage for the bees and melons. It was hung about two feet above the leaves of the melon vines and enclosed the vines on all sides. Subsequent observations indicated that the bees were working the blossoms effectively in both areas. All the vines of both varieties produced a heavy set of melons.

The colony of bees under the cloth was found to be in much better condition at the end of the pollinating period than the one in the open part of the green house. Many of the bees in open became confused and were lost while trying to get through the glass on the roof of the greenhouse. Those under the cloth appeared to return to their hive each evening and the colonies were about as strong when removed from the greenhouse as when placed under the cloth. The other colony was noticeably weakened. The colonies used in this test were in hives about one-third the size of a normal single story hive. Water and sugar syrup were provided the two colonies as needed.

The study of the pollination of crown vetch has extended over the two seasons of 1957 and 1958. The results obtained in 1957 were reported in Gleanings in Bee Culture, Vol. 86, No. 6, May 1958, pp. 281-2-3. The work carried out during 1958 is now being prepared for publication. It was interesting to note that crown vetch and red clover pollination were similar in that the bees worked both types of blossoms reluctantly and were quick to move to other flowers growing nearby if they were producing nectar. The bees probably do not like to work red clover because the nectar is out of reach except when produced in abundance. The crown vetch produced only a very small amount of nectar but a fair amount of pollen. On the other hand, red clover will produce a fair surplus of nectar



Cabbage see

during an
tions are
The vetch
pendent
red clover

The see
pollinatio
the pollin
red clover
seed prod
of placing
ty during

Bees we
clover pr
Penn-Scot
mated hig
developed
County fa
seed from
period of
mated the
ditions. S
to Penn S
perpetuate
so that it
farmers i
country.
sale is gro
dation su
versity.

**Cucumber
in a Gree**

It was
could be u

Cabbage seed of an improved variety and colony of bees used to pollinate it.

during an occasional year when conditions are favorable for nectar secretion. The vetch turned out to be entirely dependent upon insect pollination, the red clover largely so.

The second part of the program, the pollination services which provided for the pollination of apples for fruit, and red clover, cabbage and buckwheat for seed production, were simply a matter of placing colonies of bees in the vicinity during the blooming period of each.

Bees were placed in the fields of red clover primarily for pollinating the Penn-Scott variety which is is an acclimated high yielding variety of clover developed by a Mr. Scott, a Lancaster County farmer. This farmer selected seed from his own fields over a long period of years and in this way acclimated the clover to Pennsylvania conditions. Some of this seed was brought to Penn State as foundation seed to be perpetuated and produced in quantity so that it could be made available to farmers in the eastern part of the country. Most of the seed offered for sale is grown in the west from the foundation supply produced at the University.

Cucumbers Pollinated in a Greenhouse

It was found that a colony of bees could be used for this purpose for several years if the colony was placed against the outside of the greenhouse with a large opening provided to the inside of the greenhouse and a smaller opening in the other end of the hive leading to the outside. Under these conditions the bees worked well in both directions and could gather nectar and pollen in excess of that provided by the cucumbers alone. Sugar syrup and pollen substitute were fed the colony if and when needed.

Ladino Clover and Buckwheat

Bees were provided for ladino clover and buckwheat pollination to assist those working in the Department of Agronomy to develop new and improved varieties of these crops. The buckwheat consisted of local plus imported varieties. From this collection of seed, it is hoped some new and highly productive variety will be deve'oped.

It will be seen from the above report that the pollination services provided by the Beekeeping Division of the Department of Zoology and Entomology have been extensive and of great value to the College of Agriculture and especially to the Department of Horticulture and Agronomy. This is to say nothing of benefits to be enjoyed by agriculture in general from the new varieties of seed and fruit developed as a result of research at the University.

Look sharp and you will see packed colonies almost buried in deep snow. This is Quebec during early spring. The long periods of cold and snow make wintering conditions difficult but not impractical.

1000 Packages From the South

J. A. TREMBLAY
Cabano, Quebec, Canada

This involves hard work and perhaps sleepless nights but it is fun.

FOR SOME YEARS it has been common practice for Canadian beekeepers to import bee packages from the south of the United States. Those packages are wanted to increase apiaries, to make up losses from wintering, or to replace bees killed in autumn. The practice of killing the bees has been accepted in our region by very few beekeepers: it has been experimentally proved beyond any doubt that our good wintered colonies always yield a bigger crop than even the best packages.

Last April, I was asked by the Beekeepers' Association of Quebec to drive to some bee producer of the south to bring back a truckload of six to seven hundred packages. I found that I had not exactly figured the capacity of my small truck and the huge space needed for 600 packages. Since I could not take more than 500 packages in one

load, I was obliged to drive there twice in 21 days, which is a total of 7,400 miles in 16 days, the rest of the time having been spent to rest ourselves or to wait while they were preparing our packages.

I consider my two trips as truly successful. The 1,000 packages I hauled arrived at destination in good shape and full of life. I cannot understand why it is that about 25 per cent of the packages arriving by express are delivered here either dead or seriously damaged.

Our First Trip

Our first trip was slightly more difficult for I had then no previous experience at all in bee haulage. My companion was a lad from Cabano. He spoke only French and could not drive a truck in heavy traffic.

We drove from Quebec to Georgia in four days to a company who keeps 1,000 hives for producing package bees and queens.

I was amazed to notice that in April almost no honey plant was to be seen in Georgia. Cane syrup is fed to the bees so they can rear brood and produce young bees. The division board feeder is widely used. The syrup is distributed with a can. I have even seen in an apiary, copper pipes through sides of the hives to the feeders. Thus, one had not to open hives to feed the bees; a funnel was used to fill the feeders and 10 minutes were enough for a man to feed 50 colonies.

Another surprise awaited me when the time came to fill the packages with bees. Only the frames were shaken over a large funnel placed upon the package. While the bees were still falling into the funnel one had to shake it a little and they fell to the bottom of the package. They loaded the packages on my truck. When the job was over, the packages were perfectly placed one upon another with a small space left all through the load for ventilation. Indeed, I saw how skilled they were in preparing a truckload of bees.

We arrived back home April 14, at 7 p.m. I felt a little sad upon leaving the nice climate of Georgia and the heartfelt hospitality of those people who were always very kind to me. As I was leaving, the foreman of the apiary gave me good advice for the hauling of bees: "Keep your window open and, when you feel cold, it will be the same for your bees. Au revoir. . .till next week." We were lucky with the weather since it was then quite warm at 75 degrees F.

We had planned to come back as fast as possible and even not sleep at all on the way. The following night we were in Virginia. The air was already getting colder and it was raining. Therefore, we stopped along the road and wrapped our load of bees with a large piece of canvas. We took care to allow many small openings for air. Then we slept as well as we could on the seat of the truck.

On the 16th, around midnight, we were in the State of New York. But, after the New Jersey Turnpike we had left our road and were lost somewhere in New York. We had to ask information to be set again on the right way. At 3:00 in the morning we were at Suffern on the New York-Albany road. Were almost dead with fatigue and could not drive any farther. Since it was cold we tried to wrap our load of bees a little better and then we slept for about two hours. On the 17th, at 10 p.m. we arrived in Quebec City. There the mercury was at 45 degrees F. All our bees seemed healthy and alive.

Our Second Trip

On the 19th, I again went with another companion, this time my brother Philippe Tremblay from Chaudiere Station. On the 22nd we were in Georgia for the second time. We started back home on the evening of the 24th and on April 27th, at 11 p.m., we were back in Quebec.

I did not have difficulties during this second trip. The haulage of bees is quite easy. It is necessary to avoid too much heat and too much cold. If it is too hot, one must keep the truck running and allow ventilation by not covering the load; if it is cold, one must wrap the load and refrain from speeding.

Those 1,000 packages of bees were bought for the Beekeepers' Association of Quebec and destined to many beekeepers of our region. There were in the second load, 30 two-pound packages of Caucasian bees for me.

We have but one main honey flow at Cabano, in the southeastern part of the Province of Quebec. That takes place when the clover is blooming, usually beween June 24 and July 15. The

An apiary developed from southern package bees installed during the spring of 1958.

packages that we get at the beginning of May must build up strong enough around June 15 to be ready for the honey flow, otherwise they are a financial loss.

Method of Installing Packages

My method of installing packages is quite simple. I leave the bees at rest for a few hours in a place where it is about 70 degrees F. and I feed them plenty of cane syrup. Sometimes I use a brush, sometimes I just pour the syrup over the cages piled one upon another. For introducing the bees into their new homes, I take out four or five frames from the middle of the hive. I put the queen cage into my pocket where the queen will be kept warm while waiting. I take out the feeding can, shake the bees into the space left empty. I dip the cage with its queen into the syrup and throw a small amount of syrup over the bees in order to quiet them. Then I open the queen cage and shake it until the queen has fallen among the bees. Now, I must give the new colony an eight pound can of syrup and avoid disturbing them for a week. Yet I feed them a can of syrup every other day if necessary.

Fifteen days after introduction, I look to see if there is a laying queen, but I try not to disturb the bees too much. If there are eggs or brood, there is a queen; it is not necessary to see her. If no brood nor eggs are to be seen, the queen has not been accepted. Then it would take too long to wait for a new queen, because the colony would by now have already lost two weeks. There is only one thing left to do, that is to unite them with another package. Usually, I unite them with a package that looks weaker than the others. I use a sheet of newspaper placed between the orphan colony and the package with a queen.

One month after the introduction of the packages, it is necessary to visit all of them to be sure that there are no replacement cells. It would be useless to let a package raise a queen at that time of the year, namely around June 1, because there are at that time practically no drones and the new queen would not be fertilized. There is again only one thing to do, to unite that package with another weaker one. Since the queens are not always accepted or are sometimes replaced, it is always better to buy the two pound packages and to get a few more than necessary to make up for possible losses.

One must not forget to feed the packages, giving them as much syrup as they can take, notwithstanding the possible presence of some honey in early

spring flowers. Let the packages be well fed, and they will thrive quickly and yield a crop.

At the beginning of the main honey flow, around June 24 in our region, there must be two supers full of bees and at least nine or ten combs of brood, provided the packages have been well fed from the start. Every package thus developed does not need anything but to be given in due time another super of empty combs soon also to be filled. If the package is not well developed it will yield practically no crop. Then one must take a sheet of newspaper and unite it with another package. In fact, I am sure that every beekeeper must endeavor toward the production of honey rather than keeping a certain number of weak colonies unable to store a good crop.

My 30 two pound packages of Caucasian bees, thanks to the care that I am advising, have grown during last summer into 25 colonies yielding a crop of about 1,000 pounds of honey, that is an average of 40 pounds per colony. I look upon such a result as fairly satisfactory, if one must keep account of the bad weather that prevailed here during our honey flow of 1958. In our region it has been much smaller than during the two previous years. It is just too bad, because our honey is gathered from clover at the beginning of summer and, to my knowledge, better in quality than any other honey.

Over Sized Pine Cone?

REID L. WITTER
Phoenix, Oregon

I LOOK OUT, while eating breakfast, and see this large cone hanging in a pine tree. I wonder if I am really awake, or if my eyes are going bad. Closer examination proves the cone is really there, 12 feet from the ground. Formed on a limb approximately one foot in diameter and three and one-half feet in length is a swarm of bees. A colony of bees made their home in the hollow limb of a large mountain oak near this pine for several years. When swarming, they would leave at once for their new home.

Although I approached very close several times to take pictures or examine them, it did not seem to disturb them. The third day, a neighbor assisted in putting them into a nice new hive. So while the bees rest this winter, I will study about bees, hoping to be able to catch future swarms, and put them in nice new hives.

Pesticides-

This article replies to the story entitled The Tragedy of Spittle Bug Control on page 526 in the September 1958 Gleanings in Bee Culture. Since the use of poison insecticides will probably be with us for a long time this article may be helpful to those of us who keep bees, in adjusting to the problem and in understanding the importance of combating promiscuous use of poison sprays.—Editor.

RECENTLY ARTICLES have appeared in two national beekeeping journals raising again the bee versus pesticide issue. In at least two cases, one in each journal, there was an opportunity for the typical reader to misinterpret what was printed. In one of the cases, misinformation was used to support the "case" against pesticides. It is not the purpose of this article to criticize either of the authors or the editorial policies of the journals involved, but merely to support a broader view of pesticide usage.

There is little doubt that severe cases of poisoning of bees have taken place, but one would be foolish to conclude from this fact alone that even "broad spectrum" insecticides are universally harmful either to bees or to man. In fact, quite the contrary may be true. One need only cite the marked increase shown, both in forage and in bloom, by alfalfa treated with DDT prior to bloom. Such increase has been reported by entomology and agronomy research people working in many different locations across the nation.

It is true that the use of the insecticide does not guarantee increased seed or nectar yields since these depend upon other factors in addition to increased bloom. Other plant activities affected by moisture, sunlight and soil fertility, to mention a few, determine the nectar secretion. There are no cases where an insecticide has retarded nectar flow if natural conditions are favorable for it.

Since the effect of insecticides on man is usually brought into the argument, it might be well, at this point, to use the alfalfa example to explain this relationship. If the alfalfa is to serve as forage, the time and rate of insecticide application are set so that no harmful amounts of insecticide residue appear in the end product, in this case meat or milk, which man may consume. The role of pollinators, along with possible residue problems, is almost always included in studies concerning the use of insecticides on a cross-pollinated field crop. It is quite obvious that no entomologist is going to devise a program of insect control which will result in ultimate losses to the farmer. That the increased production must more than equal the cost of insecticide plus application is an accepted axiom which cannot be fulfilled if necessary pollinators are eliminated.

Insecticide residues and their effect on man are currently one of the major study areas in entomology. It goes without saying that it will do the human race little good if it is poisoned along with noxious insects. Thus, residue tolerances are not established by insecticide companies but by independent research groups and various branches of the federal government. In all cases these tolerances are significantly below the minimum insecticide dosage which causes measurably abnormal behavior in study animals. Not incidentally the effects of DDT on man have been studied and the above principle was found to be valid. Currently tolerances for phosphate insecticides are being set at levels which will permit continuous mammalian intake at that level without measurable physiologic changes as a result.

To insure such tolerances are observed, the Federal Food and Drug Administration carries on a program involving random sampling of all food and drug products which may directly or indirectly enter the human food supply. If one is not acquainted with this compe-

A Broader View

DAVID M. NOETZEL*
Fargo, N. D.
* Assistant Entomologist, North Dakota Agricultural College, Fargo, North Dakota.

tent and workman-like group, he should be, since they control the cleanliness and healthfulness of our food supply. The Food and Drug Administration is truly outstanding in its performance of this service.

At this point you might say everyone except the person applying the insecticide and his immediate neighbor is protected from the effects of the insecticide. Essentially this is true although the law requires that all precautions in handling and applying must be plainly stated on the container's label. Assuming proper application is made, this points up the part the beekeeper can play in protecting his interest from what he feels is indiscriminant spraying.

If records of insecticide sales for the past 10 years are any indication, insecticide usage is going to increase. When crop yields can be doubled, tripled, and even quadrupled by application of a pesticide, that pesticide will be applied irrespective of the bees which may be flying over the crop to a field of nectar-producing plants.

The beekeeper is wise to support research into the beneficial role of the honeybee and the effects of control programs on it. In North Dakota, for example, the establishment of sweet clover pastures could be greatly helped if the sweet clover weevil were controlled through the use of insecticide. It is only through such controlled studies that valid information concerning the relationship of all the aforementioned factors can be collected.

It is up to us as beekeepers to inform our neighbors of our operation and the benefits they derive from it. We should inform the county and township officers of our outyard locations even though no insect control programs are contemplated on the township or county scale. All growers who have nectar sources on their land within two miles of the outyard should be informed of the fact their bee pasture is in use. Aerial applicators should be approached each season and informed of the yard locations or at least made aware that there are bees in the area.

This seeking of cooperation should not be a chip-on-the-shoulder program but should be in the spirit of mutual help. If poisoning has become a regular proposition, then the only choice one has is to move his yard, but he should not do this without thanking even the uncooperative. In cases where the grower has asked for pollination, a simple written contract should be made involving some stipulated amount for compensation if the nectar source is sprayed while in bloom.

I have been keeping bees for the past 12 years and have had both pasture and bee yard treated at least three of these years with DDT up to one pound per acre. These applications were made properly (i.e. in the evening), the coverage was complete, and the kill of noxious insects at which the spray was directed was good to excellent. I have not experienced a severe reduction either of bees in the colony or in honey yield. At times prior to the aerial spray I could not comfortably work the bees because mosquito biting was so severe.

It is difficult to understand this continuing animosity of some beekeepers toward pesticides. The manipulation of pesticides by man is unquestionably beneficial to man and his bees when properly done.

Records of per colony honey production in the United States show that yields have not dropped for the past 20 years despite the introduction of the synthetic hydrocarbon and phosphate insecticides about ten years ago. In one of the same publications referred to in the first paragraph, a statement was made that only two percent of the mortality of colonies in a season was due to pesticide usage. These items indicate that, although poisoning is present, it is not an overpowering depressant of the honey industry.

We do not improve ourselves or our beekeeping industry by carrying on such tenuous arguments. We have much more to gain by dropping these arguments and searching for new ways of beekeeping to fit into an agricultural picture dominated by the use of beneficial chemicals.

A Two Queen Colony That Pays

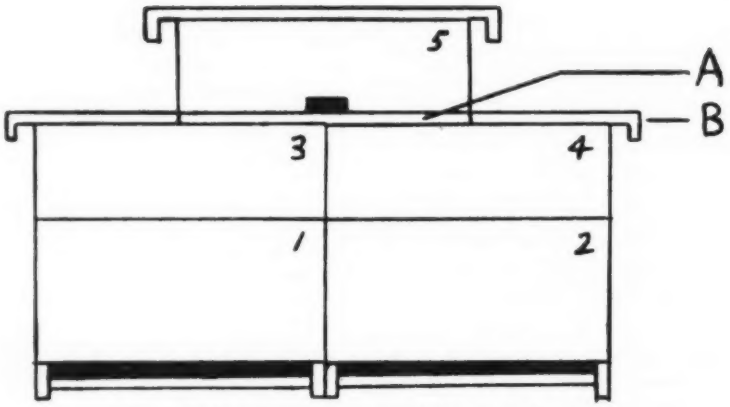


Fig. 1. Early spring, (A) queen excluder, (B) half cover.

Success in beekeeping, as in many other enterprises these days, depends a great deal upon getting the highest amount of production with the least possible amount of labor. It is with this in mind that the author writes this article

C. L. JONES
Topeka, Kansas

ONE OF THE biggest disadvantages of the two queen colony is the difficulty and back-breaking labor involved in manipulating such a colony. The colony must be completely dismantled when examining the lower brood nest, and at least partly dismantled when examining the upper brood nest or putting on supers.

I think it is generally agreed upon that a large force of bees working together will store more honey than the same number of bees working in two separate colonies. Hence the advantage of the two queen colony is to have the offspring of two queens working together in one huge colony.

When the two brood nests are placed side by side instead of over and under one another, manipulation is made easy by the simple fact that during the build-up season they are operated as two separate colonies and may be examined simply by lifting a cover instead of lifting one colony off the top of the other one. Then the big labor-saver comes during the honey flow when top supering is practiced instead of removing the top colony to place surplus supers between the two, and then re-

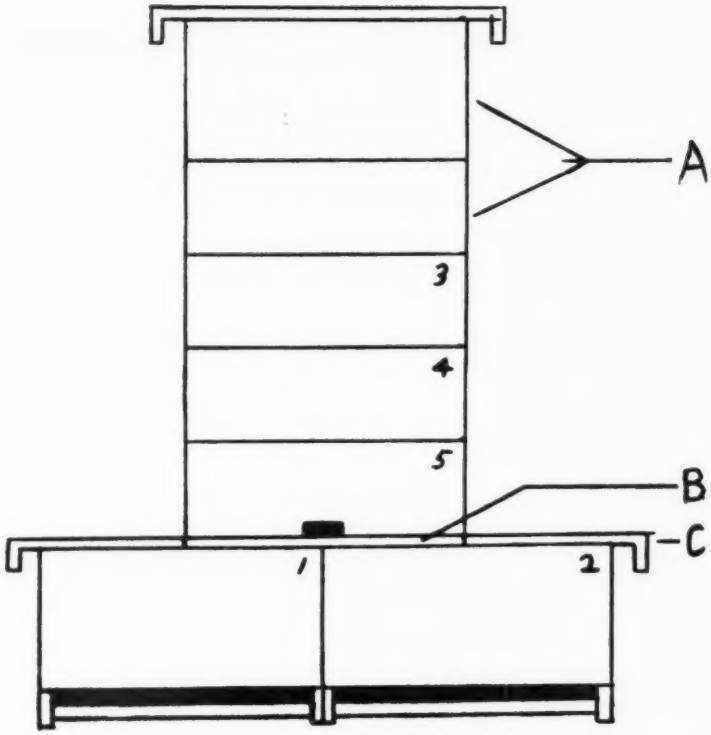


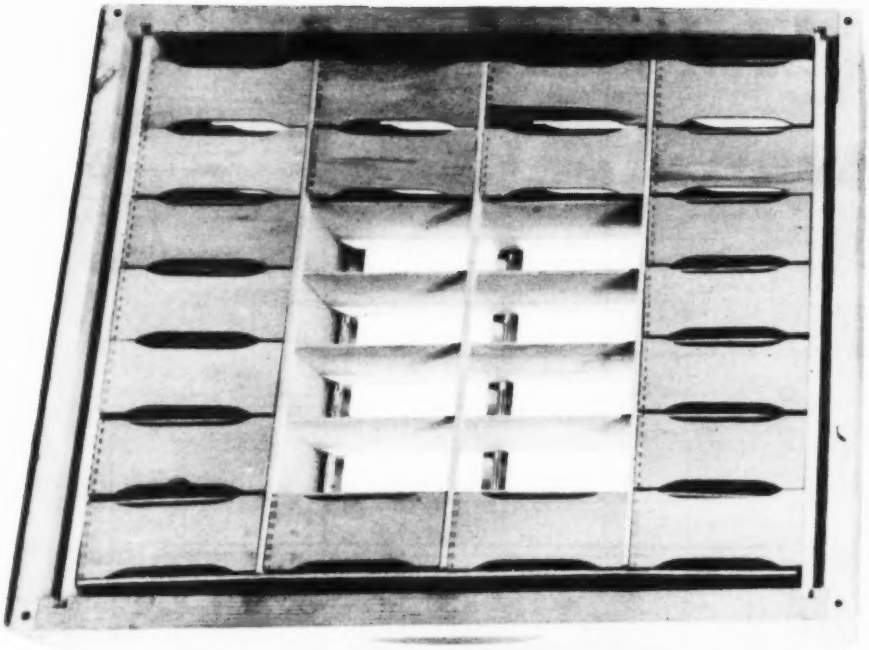
Fig. 2. During main flow, (A) surplus supers, (B) queen excluder, (C) half cover.

moving them later on to the top of the pile for finishing. Only one type of special equipment is required and that is the half width covers over the outer portions of the brood nests, which are easily made.

To establish such a colony, two hives are set side by side on a good level surface. If there is any danger of slippage, the two bottom boards may be nailed together so that the two hives will always remain at the same level. These may be two separate colonies or a good strong colony may be divided to form the two colonies. A queen excluder is placed over the center of the two colonies, as shown in the drawings, and a shallow super above this, then the covers. An upper entrance may be provided in the shallow super. At the beginning of the main flow, supers No. 3 and No. 4 are placed above the excluder, as shown, and the queens confined to the lower brood nests. Top supering is then practiced for the remainder of the season. The placing of supers No. 3 and No. 4 (which will contain some brood) above the excluder will tend to draw the bees into the supers. When the brood is hatched out, the supers are left on for storage of honey. At the close of the season, the colonies may be given separate food chambers and wintered as separate colonies, or if it is so desired, one may be set on top of the other, letting the two queens fight it out, and wintered as one big colony.

The opening in super No. 5 was left closed in my experiments until the honey flow began, however, I expect that either way would prove satisfactory. The bees used this opening to a great extent when I did open it.

I divided strong colonies to form most of these two queen colonies. One thing that might be well to mention is that when using two separate colonies to form this colony, a newspaper may be placed beneath the excluder to unite the two, or a division screen used in place of the excluder for a few days.



The top view of a T comb honey super. Eight of the center sections have been removed to show the bottom T tins that support the sections.

Comb Honey Equipment

CARL E. KILLION
Paris, Illinois

AFTER COMPLETING over 22 years as an Apiary Inspector including the examination of several thousand colonies of bees, one gets a little insight on bee equipment. During these years I have traveled in 32 states and Canada in connection with my work. I have found bees being kept in all sorts of equipment and under a vast assortment of conditions. One condition noted was that in almost every case the owner expected the greatest profit from investment and labor involved. After all this time one should be able to sift a few grains from all the chaff or to recognize good equipment and good management.

I have tried to learn from other beekeepers, and their equipment and management, what my experience with my own equipment and management did not reveal. Whether I have gained anything from this vast amount of travel and experience will always be disputed by those who may disagree.

When I started beekeeping there were more comb honey producers than extracted. Right now it is rare to find a beekeeper who even mentions comb honey, much less tries to produce any. We do have a flare-up of shallow frame comb production right now. Whether this type of honey will increase in production will depend on whether the beekeeper has a fair amount of success in producing it, or if he packages and promotes it successfully.

Although I respect beekeepers who prefer to produce liquid honey, my own interest is in the field of section

comb honey; of course these last few years there has been some interest in shallow frame comb honey. I consider myself fortunate in an effort to follow the methods and equipment of Dr. C. C. Miller. I had one of his most devoted followers living only 10 miles from me. This was the late Charles A. Kruse of Paris, Illinois. At that time I was living in Indiana and Kruse was instrumental in our moving to Paris and the forming of a partnership, which lasted for five years. He was a lover of the eight frame hive and I preferred the ten frame Langstroth size, with only nine frames and a follower board on each side. Today, in this "Rock 'n Roll" age, I am perhaps being called a "square". Maybe I am a "square" in the use of the follower boards but I haven't found any one who can prove I am not right in their use. That is a pretty good foundation to stand upon. During the five years partnership with Kruse the large hive gave us an average of about six sections more per colony. They also did not require as much help in the way of spring feeding.

For many years I have been rather reluctant to come right out and bang my fist on the table and talk about the comb honey super we use. After watching advertising on TV for cigarettes, beer, cars, breakfast foods, and patent medicines and noting how every concern claims theirs is the best, then I can do the same.

The T Super

The T super first made its appearance in the United States in 1883. Mr. D. A. Jones, Beeton, Ontario, brought one to the National Beekeepers' Meeting that year and showed it to Dr. C. C. Miller. It was the best super Dr. Miller had seen and he used it. Kruse liked it and made improvements over the one Miller used. I had used the T super in Indiana and it was good. My son and I have also added some improvements to it and today I place the ventilated T super at the top of the list in my comb honey equipment. I will also claim this super is "tops" for shallow frame comb. There are several shallow frame honey producers who will disagree with what I have just said.

There are several reasons why a producer will select a certain size frame for his shallow frame honey. Is one reason because there are only a few to choose from in the supply catalogs? Is it because the frame you use gives you the best number of a certain size, cut with the least waste? Then what about a frame and super that gives the fastest filling and most perfect combs?

In our production of section comb honey we can shift immediately to shallow frame. The small closed end frames will hold enough comb to fill seven of the one pound, round, chunk honey jars. There are six cuts of full length and every seventh jar has two equal sized pieces to equal in size any of the other six pieces. The frame can hold seven equal size cuts if one prefers the short fatter size jar. The depth of the comb is perfect for filling the two and one-half pound square jar. We have also used it for filling special orders of the five pound square jars.

There are men who claim they have remodeled some of the standard S comb honey supers to equal the ventilated comb super we use, but I know better. At one time I remodeled oved 500 ten frame comb honey supers like some of the ones they write about. I recall what Dr. Miller once said about section holders in supers, "too many sticks and spaces". After trying these "converted" supers for five or six years I threw them into the fire. When I filled or emptied them it was like working in a lumber yard. I am sure we can clean propolis from our equipment in about one-third of the time required to mess around with a bunch of section holders and scalloped separators.

If the readers of this article would try a deep bottom board one season I wonder how many would go back to the ones they have been using. In my inspection work I find thousands of frames in hives where the bees have gnawed their combs away from the bottom bars (or never built down to them). In my conversation with the owners they seemed to think it natural for bees to do this. It may be a natural instinct but there is a way either to fool the bees or give them what they want and it will eliminate all this space next to the bottom bar. In so doing there is considerable brood rearing space added to the brood frame.

Try the two inch bottom board with the slotted rack underneath the frames and you will see the difference. It is said, "seeing is believing".

Some beekeepers add all their supers in late spring.

When Spring has "Sprung"

After reading the "Spring Management" article in the March Gleanings, several of my friends (and of course, critics) said: "Why don't you drop the other shoe?" "It seems you are leaving us in mid-air; why not tell about your late spring inspection?"

MILTON H. STRICKER
Stockton, N. J.

PERHAPS THEY DO deserve an answer. This second inspection trip made in late March or early April is important and though most of the New Jersey honey producers make this trip, they sometimes call this "just supering". Most of them who sometime in their past have had a serious outbreak of AFB make a thorough inspection for disease at this time. Usually the weather is warm enough so a thorough inspection can be performed, and if other bees are in the area, there is always danger that your bees have picked up something they shouldn't have.

If at this time no disease is found and colonies are found occupying both hive bodies with queens laying adequately, a third story is added containing combs on the outside and three or

more frames of foundation in the center. In my own case, I reverse the first and second stories and then add this third story.

In many cases beekeepers in this area do not use any foundation at this time and colonies found normal are given three or four standard bodies of comb. Where shallow supers are used, a standard super is used as a third story and then the shallows are piled over this.

Practically all of these northern honey producers are "agin" excluders and the supers are piled on without the benefit of these "honey eliminators". There are still a few beekeepers in this area who do use excluders, but these all allow the queen to run in at least three standard bodies, and if the queen is not capable of filling these three in April and May, and maintaining a populous colony until the June honey flow starts, they all requeen because they know it takes a "barrelful of bees" to produce honey in Northwest Jersey.

Those queens that weren't up to par on the previous trip are now replaced with queens from the South. In some cases beekeepers have had their own stock raised for them by southern breeders, or they have favorite breeders whose stock works out well in this area.

Bees Checked for Honey and Pollen

There should be at least 15 pounds of surplus honey to tide the colony over any occasional rainy period which could break the brood cycle. If ample pollen is not found either stored or coming into the colony at this time, dry pollen substitute (soybean meal, brewers yeast mixed with sugar) can be sprinkled on the escape board.

For those beekeepers like myself who only add the third super at this time, another trip is in order for the pile-up of supers which are expected to hold the anticipated crop. This trip will be made just as soon as the bees start work on the sheets of foundation. If the weather is good and bees are working, this trip will have to be made quickly as the secret of this North Jersey "let-alone" system is adding the supers early. It has been described as, "making the bees realize there is a lot of space to fill before they can think about swarming". This simple honey getting system that all the larger honey producers in Northwest Jersey use is mostly called the "let-alone" system. Some label it as "scientific-neglect".

Very few of these beekeepers depend entirely upon southern queens, even though through the trial and error method they have found satisfactory stock to buy when they need them in early spring. Most beekeepers that practice this "let-alone" system dabble in stock improvement and try raising a few queens of their own each year. Testing as they go, they will have queens raised from their better queens by either local or southern breeders. They are all looking for queens that build populous colonies quickly enough to have lots of honey gatherers for the tulip poplar flow in early June. They want a non-swarming stock that needs a minimum of care to keep it going throughout the year. They religiously practice requeening of any colonies that show a disposition to chimney the brood through the supers instead of keeping it down in the lower hive bodies. Most have gone over to hybrid bees, trying like myself to combine the good traits of all strains and races.

This stock improvement is thought to be so important that when the crop is removed in September, those non-producers that have been star-boarders are requeened with local stock even though it has been untested or may be of some neighbor's stock that the owner would like to try.

To briefly sum up this early April trip made by North Jersey honey producers to their outyards; First, they inspect for disease which can be a problem in those years that robbing is prevalent. At the same time, reserve stores of honey and pollen are checked, and feeding is resorted to if the equivalent of three full standard frames of honey is not found. Dry pollen supplement is sometimes added if colonies look short of pollen. Colonies are either supered with all the supers of combs thought necessary for the coming season, or some beekeepers prefer to add a third story which contains three or four frames of foundation, then come back in a few days to add the bulk of the supers. Requeening is done at this time, or colonies are marked to be requeened later on since the maintenance of good stock is of prime importance in this "let-alone" system of honey production in Northwest Jersey.

Showing one of the three double brood chamber colonies with new comb started at the bottom board entrance.

Unusual Comb Honey Season

In my 60 years of beekeeping, this is the first time I have had a good crop of honey from alfalfa.

GUSTAVE TELSCHOW
North Lake, Wisconsin

LAST YEAR the bees wintered well and the spring season was favorable for colonies to build up rapidly. There were many wild flowers blooming in the woods and way-sides. Some of the blooming soft maple trees were just beautiful with their fluffy limbs displaying various shades in the bright sunshine. The plum trees were on schedule, starting to bloom in this locality the last of April. Soon the dandelions began blooming and the box elders, sugar maples, pears, and cherries were a source of early nectar. Later when the dandelions and apple trees were in full bloom, the nectar came in so freely that the bees stored surplus honey, even started capping some of the combs.

White clover started blooming the first of June. It was plentiful and the plants seemed in good condition, presenting indications of a bumper crop. But the weather turned cool with insufficient rain. Although some of the fields were white with clover bloom,

it failed
the heav
couraged
cool wea
month of
of July.

On Ju
apiary ar
hives as
were ver
warm ab
a light sh
of the b
duce nec
tion com
putting t
bees fro
foundatio

**I Try Ou
Brood Ch**

At this
to try ou
producing
double br
had three
all the b
transferre
bodies. I
section co
comb on
having fu
third hiv
placed or
days over
given to
honey.

Smok

HAVE Y
for sm
creosote t
ing it. It
and I did
bee magaz
or drop
Every da
pounds th

Our C

HER ROY
faithful reti
act of layin
is said to b
sary that sh
each day d
der that th
rate during
W. W. Witt

it failed to produce nectar. A few of the heavy colonies even became discouraged and started swarming. The cool weather continued throughout the month of June, including the first week of July.

On July 7th I was working in the apiary and was compelled to close the hives as the bees started robbing and were very cross. The weather turned warm about the 10th of July, giving us a light shower, and the clover and some of the basswood trees started to produce nectar. I immediately put on section comb honey supers, (had hesitated putting them on before) to prevent the bees from tearing down some of the foundation.

I Try Out Double Brood Chamber Colonies

At this time I selected three colonies to try out M. J. Deyell's method of producing section comb honey over double brood chambers. These colonies had three hive bodies at that time and all the brood in the upper story was transferred to one of the lower hive bodies. I then gave each colony two section comb honey supers, with drawn comb on each side of the section boxes having full sheets of foundation. The third hive body without brood was placed on the section supers for two days over a bee escape board and then given to a colony run for extracted honey.

It seemed nice to have warm weather that was somewhat humid. One night we had another light shower and how the bees worked going out and returning from the fields. But the rain that had fallen wasn't enough and the ground soon dried out. Pastures displayed a brownish tint. Farmers stopped making hay and turned their cattle into the second crop alfalfa fields, that in most cases were just starting to bloom again. The secretion of nectar wasn't too heavy, but the bees kept on working and more supers were added. The three colonies with two brood chambers made no effort to swarm, perhaps due to being near the end of the swarming season.

During August the nectar kept on coming in and I ran out of material. In fact, if I had had more section boxes I wouldn't have put them on the hives that late in the season, fearing there would be many unfinished sections. This way, almost all of the comb honey sections were finished and a good per cent weighed a pound.

Using Mr. Deyell's method of producing section comb honey, the colonies did not require late autumn feeding. I always winter double brood chamber colonies. When I packed those three colonies for winter, the first week in November, they were still heavy and seemed nailed to the ground.

Smoker Fuel

LEO R. HUBBARD
Coral, Michigan

HAVE YOU ever tried bailer twine for smoker fuel? It contains a little creosote to keep the hoppers from eating it. It is the best fuel I ever used and I did not see it referred to in any bee magazine. It does not throw sparks or drop out coals like sumac bulbs. Every dairy farm has hundreds of pounds they burn up.

Our Cover

HER ROYAL HIGHNESS, surrounded by her faithful retinue of attendants, is caught in the act of laying an egg in a cell. Since the queen is said to be the soul of the colony it is necessary that she lay between 1,500 and 2,000 eggs each day during the height of the season in order that the birth rate may exceed the death rate during the honey flow.—Picture sent by W. W. Wittekindt, Bonn, Germany.

"THIS IS YOUR BANK ACCOUNT OF MONEY EARNED FROM BEEKEEPING? ADULT OR NOT, I GUESS YOU'RE GOOD ENOUGH TO ADVISE ME ON THE MERIT BADGE!"

NEWS REEL

These skunks won't bother Paul Nichols' bees any more. Paul, a resident of Douglas, Arizona, prepared a delicious appetizer of salt pork, hamburg, and poison for his unwelcome boarders. Bee-eating skunks are a serious problem to beekeepers in some areas. Nichols has had to destroy over 35 skunks in recent years. These hives are located on the San Bernardino Ranch.

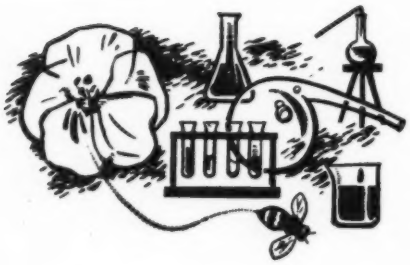
The Honey Sales Company of Minneapolis, Minnesota, has provided new sales appeal for its Land O' Clover Natural Honey by offering the product in two different re-usable glass containers — a refrigerator jar and a glass mug — both manufactured by the Hazel-Atlas Glass Division of Continental Can Co.

German im
Food Fair
Mueller an
W. Webste

Rep
me
Ray

German importers and U. S. Gov. representatives inspect samples of honey at the International Food Fair in Munich, Germany. The fair ran from Sept. 25 to Oct. 5. Left to right: Paul M. Mueller and Joseph Graf of Munich, Paul F. Taggart, Ass't. Agric. Attache, Mrs. Mueller, Marvin W. Webster, marketing specialist, U. S. Dept. of Agric., and Lorenz Otter, Munich.

Representatives of the American Beekeeping Federation discuss resolutions passed at the Tampa meeting with Sec. of Agric. Benson. Left to right: Lawrence Budge, Pres. of ABF; Roland Stone, Ray Reed, Sec. Benson, Barney Remer, Woodrow Miller, and Clarence Benson.



Research Review

DR. ROGER A. MORSE
Research Editor of Gleanings
and Ass't. Prof. of Apiculture
Cornell University, Ithaca, N. Y.

More on Social Hormones (Queen Substance etc.)

THE AUTHORS of the article below feel that the term hormone should not be stretched to include substances which are secreted to the outside of an animal's body. Hormones are materials produced by glands in the body and transported to remote parts of the body where they bring about specific effects. Instead they offer the term "pheromone" for materials which are messengers among individuals and which one secreted externally.

The review contains a section on royal jelly and discusses the possibility of its containing a pheromone. The authors feel that food alone could not be responsible for the development of a queen bee and feel that there must be some substance (pheromone) in royal jelly which is active in her determination. Several persons have heretofore suggested that food alone is responsible for the difference between queens and workers.

Pheromones which have an odor and act on the olfactory senses are fairly well understood. The authors question if pheromones such as queen substance act in the body as do hormones or if they affect taste perception. The next step necessary in the study of these substances is their purification so that injection into a bee's body is possible.

Pheromones of ants, termites and bees are discussed at length. The literature review was completed last May and the paper contains 111 references.

Karlson, Peter and Adolph Butenandt.
Pheromones (Ectohormones) in Insects. Annual Review of Entomology 4: 39-58. 1959.

French Beekeeping

SEVERAL interesting notes about beekeeping in France are given in a recent article in Bee World. There are several commercial beekeepers in France. The major nectar flows come between March and September. The bees kept in France are largely black bees with crosses between blacks and Italians being very popular. The use of straw skeps has largely disappeared and most colonies are kept in movable frame hives.

It is mentioned that propolis is used in the perfume trade but the extent of its use is very limited. Does anyone know if such a market exists in this country? In 1958 the production of pollen for use by dietetic firms was in the order of 10 metric tons. There are three or four concerns making mead on an industrial scale, with mead production being also popular amongst the beekeepers.

The common market treaty which recently went into effect will have a marked effect on French beekeeping and also on imports and exports from that country. Up until now France has imported more honey than she has exported.

Bernock, R.
Facts About Beekeeping in France. Bee World: 40: 29-37. 1959.

American Foulbrood Incidence in New York State

FOR THE FIRST time since the inception of foulbrood inspection in New York the level of disease is less than one per cent. Some New York State counties showed no disease in 1958. This record is certainly to the credit of the inspection service and also the beekeepers who have stood firmly behind the inspection program. Colonies infected with American foulbrood are burned in New York State with a very few being shaken on foundation.

Mimeograph report. New York State Apiary Inspection Service. 1959.

FROM Foreign LANDS

Translated and Edited by ERIKA BARTH, San Antonio, Texas

New Thuringia Bee Strain April Fool Joke ? ?

IN OUR January 1959 column we mentioned a new strain of bees bred in Thuringia, Germany as originally reported in the April 1958 issue of the **Leipziger Bienenzeitung.**

Since, at this time, it is biologically impossible to crossbreed honeybees and bumblebees, many comments were received asking for further investigations. One of our readers, Mr. Otto Mackensen, of the U.S. Bee Culture Research Branch in Baton Rouge, La., was kind enough to write Dr. F. Ruttner of Lunz am See, Austria, for his opinion in this matter. Dr. Ruttner states that such stories have appeared in the April issues of European journals as an April fool joke and that somewhere in the same issue a mention would be made of it. Upon very close examination of the April issue no such statement has been found. Unfortunately, the following May issue has been destroyed so the further examinations cannot be made.

This "joke" stems from the Russian Zone of Germany and one can only wonder if we have again come across a sense of humor strange to us. Henceforth, any articles from European April issues will not be published until a thorough investigation has been made of both April and May magazines.

Sugar Price Increase Blow to Dutch Beekeepers.

AN UNEXPECTED sugar price increase of 6 cts. per kg., which also includes sugar for beekeepers, was the latest blow to Dutch apiarists. Beekeepers who have already ordered their sugar for spring feeding will still receive it at the old price. The others, however, will have to pay for it at the new prices. Although the increase is small, after the tragically poor year of 1957 and the but fair 1958, the new price of sugar is almost more than most Dutch beekeepers can pay.

Maandschr. voor Bijenteelt, Oct. 1958.

German Laws Regarding Bee Swarms.

THE OWNER of a swarm can follow his bees and is allowed to trespass on any strange property without further permission of the owner in order to retrieve his bees. He still has the right to claim his bees when they fly into another beekeeper's empty hive body, but he is liable for any damage to equipment that the removal of his bees might cause. If however, a swarm should combine with an already established colony in a neighbor's yard, rights to the swarm are lost.

Suedwestdeutscher Imker, Dec. 1958.

Dr. Dyce Visits Australia.

PROMINENT American Apiculturist, Dr. E. J. Dyce of Cornell University, is presently visiting beekeepers in Australia. He is the second American beekeeping specialist to visit Australia in the past year. Dr. E. J. Eckert of the University of California returned from that country last year.

Dr. Dyce is visiting Australia on a fellowship for the purpose of gathering information on the modern Australian honey handling methods. Australians have honored the Cornellian by featuring his picture on the cover of the February issue of **The Australasian Beekeeper.**

The Australasian Beekeeper. Feb. 1959.

Editorials

Price Support Falls

THE U. S. Department of Agriculture announced March 23 that honey will be supported during the 1959 marketing season, which starts April 1, at a national average price of 8.2 cents a pound. This is 60 per cent of the March 1959 parity price (announced February 27) adjusted to the 60-pound container level.

The program for 1959-crop honey provides for farm-storage loans and purchase agreements on U. S. Grade C or better extracted honey which is stored in 60-pound or larger containers in approved storage and is not objectionable in flavor. Beekeepers or cooperative associations of beekeepers may apply for loans or purchase agreements directly to Agricultural Stabilization and Conservation (ASC) county offices.

To give producers more time to market their honey in regular commercial channels and thereby minimize the quantity delivered to the Commodity Credit Corporation, the maturity date for loans and purchase agreements for both the 1958 and 1959 marketing seasons has been extended from March 31 to April 30.

The honey price support program authorized in the Agricultural Act of 1949 is intended to extend interim financial assistance to beekeepers, thus providing them an opportunity to market their production of honey in an orderly manner. USDA also emphasized the importance of continued and intensified activity in improving the marketing and distribution of honey by all elements in the industry.

In announcing the honey price support program, USDA again urged beekeepers to increase efforts toward utilizing bees in pollination of important pasture, seed, vegetable, and fruit crops on a remunerative basis.

Detailed information regarding the program, including maturity date for loans and support prices by classes of honey and areas of production, will be available at ASC county offices in the near future.

Price support for honey within a range of 60 to 90 per cent of parity is mandatory under the Agricultural Act of 1949, as amended. If 60 per cent of the parity price for honey adjusted to the 60-pound container level is higher as of the beginning of the 1959 marketing year (April 1) than the national average level of support announced today, the support level will be increased accordingly.

For the 1958 crop of honey the national average support level was 9.6 cents per pound, equal to 70 per cent of parity.

Orchardists and Seed Growers Need Bees

SOME YEARS AGO it was sometimes rather difficult to secure suitable locations or sites for commercial apiaries. Farmers and even some fruit growers were not then sold on the importance of bees to agriculture. When the question of placing an apiary on a farm was mentioned to the owner, he would usually make it known in no uncertain terms that he wouldn't have a bee on the place. And yet, that same farmer was being benefitted by the honeybees from nearby bee trees and perhaps bees from some neighbor's apiary.

Today the situation is changed. Farmers, fruit, and vegetable growers are asking for bees and in some instances, practically imploring beekeepers to place bees near or in the fields of clover and orchards. In fact, some beekeepers are now securing rental for colonies of bees furnished for pollinating purposes and that is as it should be. Some years ago the beekeeper had to pay the farmer for the privilege of placing bees on his farm.

This change in the attitude of the farmer augurs well for the future of our industry. The honeybee is performing an indispensable service to agriculture, which shoulld be recognized. It has been said on good authority that honeybees are responsible for at least 82 per cent of the pollination services performed for over 50 farm crops, including vegetables, fruits, and legumes.

In some instances it may be somewhat difficult to find an ideal location for a sizeable yard, one that is reasonably remote from a traveled road or a dwelling house, so that flying bees will not come in contact with people or animals. Locations for commercial apiaries should, of course, be easily accessible, near a constant source of water and sheltered from prevailing cold winds. Such ideal bee locations are usually rather difficult to find.

What to Do with Combs of Granulated Honey

AT THIS SEASON of the year we receive some letters from beekeepers who want to know what they can do with combs containing granulated honey that should have been extracted last fall.

Since it is practically impossible to extract the honey out of such combs, we advise using it for bee food. Even though the honey has crystallized the bees will utilize it, especially after warm weather arrives. Many colonies may be short on stores before the major honey flow begins. A few combs of honey given such colonies during the critical spring period may mean the difference between success and failure in securing the maximum crop.

Beekeepers should be reasonably sure that combs of honey to be fed come from disease free colonies.

Keep Programs Down to the Beginner's Level

WE OCCASIONALLY attend a beekeepers' meeting where those appearing on the program talk over the heads of some beginner beekeepers in the audience. It is natural, of course, that some talks on scientific subjects may not be well understood by beginners. In this connection, it is an advantage to have at least a 10 minute period between talks to allow time for questions and comments from the floor.

If parts of a program seem somewhat top-heavy with discussion of scientific subjects, there should be, in our opinion, a part of the program devoted to the discussion of topics right down to the level of beginner beekeepers. Speakers should make their talks so simple and down to earth that even the youngest beginner will have at least some understanding of what is said. Where it is necessary to use scientific terminology, terms used should be defined or clarified.

It would be a pity to have a program so scientific or high-brow that beginners who attend would not get anything out of it. It would seem that if all beekeeping programs were interesting and appealing to all grades of beekeepers, the attendance at meetings would be greater than at present.

B & Z Library

Live and Learn

PROPOLIS PETE

IT'S A GOOD THING that I hedged when I was crabbing about what I expected my bees to do during the winter. Came a nice day in the middle of March, and I made a wonderful discovery. Of the 18 colonies I had left after the crop dusters got through with me last summer, only two needed feeding. Another was well supplied with stores, but had a piddling little cluster, and a fourth had a fair to middling cluster, but was fresh out of honey. I united the last two and gave the first two some tank scrapings and dregs that I had saved over from last year's extracting especially for the purpose. So far as I can see, every thing is now rosy, and let that be a lesson to you.

One thing that bothered me last summer was scattered brood. I still have it, but when looking the combs over, I noticed something that I have missed on previous examinations. The brood is scattered so far as maturity is concerned, but the brood nest itself is compact. In other words, there aren't the solid areas of brood of the same age, but a patch of brood will have eggs, small larvae, big larvae, and sealed brood all in a jumble. I can think of a perfectly logical explanation, but whether it is true I am not so sure.

Supposing, when the queen started to lay her eggs in the late winter in the middle of the cluster, some cells were not ready for her. Maybe a bee was taking a snooze in one, maybe some had a few crystals in them, or maybe some had just not been cleaned out for laying. She would skip those cells. On her next trip around she would lay in the cells that were ready for her at that time. This could cause scattered brood like I have. Every cell has something in it, but because of the difference in the age of the larvae, it could cause the comb to have a pretty bad looking brood pattern. This needs watching and will get it.

Bees Wouldn't Take Pollen Substitute

Another thing that I notice again this spring is that my bees just won't take artificial pollen. Quite a few years ago, when the idea of feeding soy flour and brewers' yeast was put out, I mixed up several batches with an assortment of ingredients. The bees worked them all quite well the first year, but since then don't even bother to look at them. It could be that they get enough natural pollen from the elms and silver maples, but there are so many cold raw days when they really shouldn't fly too far, and on which I don't see any pollen coming in, that if they needed it they should go for the flour. Either they don't like what I have to offer, or they have enough left over from last fall.

For an experiment, I put out several different combinations, including a saucer full of scrapings from cracked corn sacks. This they looked over without much enthusiasm, but totally ignored the soy flour combinations. The bees don't go for the cakes of flour mixed with honey or syrup. If I put them over the frames, they don't work them, and if I put them out in the open the bees will sniff around the ones with honey in them, but they don't chew on them.

Between the dutch elm disease and an over-enthusiastic highway department, we are gradually losing our fine old elms. When they are all gone, it will be interesting to see if the bees will work the flour. And when they are gone, and our roads look like another new development, will the bees find some other plant that they don't work now? It is hard to look ahead.

Some more good luck this spring was the fact that my packages came through right on time, in splendid condition, and were in the hive within an hour after I got them from the post office. I always have them shipped parcel post because they come through in three days, whereas it takes

(Continued on page 319)

Let's
A

SUMAC
species
keeping i
best know
are the Sn
photograp
here, and
ina), both
June and
south is th
lina) whic
ally in lat
species is
(Rhus arc
threes and

Smooth Sumac (Rhus glabra).

Let's Talk About HONEY PLANTS

HARVEY B. LOVELL
University of Louisville
Louisville, Kentucky

SUMAC (**Rhus** spp.). There are many species that are valuable for beekeeping in the United States. The two best known ones in the eastern states are the Smooth Sumac (**Rhus glabra**), a photograph of which is reproduced here, and Staghorn Sumac (**Rhus typhina**), both good honey producers in June and July. More common farther south is the Dwarf Sumac (**Rhus copallina**) which blooms a month later, usually in late July and August. A fourth species is the little Fragrant Sumac (**Rhus aromatica**) which has leaves in threes and grows on rocky ledges and sandy soils and is heavily worked by honeybees.

Three species of sumac are poisonous, the well known and much hated Poison Ivy (**R. radicans**), a three-leaved vine, which climbs high into forest trees by means of little rootlets on the stems; Poison Oak (**R. Toxicodendron**), a low shrubby bush with three-parted leaf clusters, with each leaflet lobed somewhat like an oak leaf; and finally, Poison Sumac (**R. Vernix**), a shrub very similar to the above-mentioned sumacs but with grayish instead of red berries, and the margins of the many leaflets

not toothed as in the smooth sumac. All three of these poisonous species are attractive to bees and yield a mild, well-flavored honey, which is not poisonous.

A different species of Poison Oak (**R. diversiloba**) is widely distributed in the far west over the Coast Ranges and the Sierra Nevada mountains up to 5,000 feet. A. Burr Black, State Apiary Inspector of Oregon, wrote me that Poison Oak blooms from May 25 to June 5, and makes a good flow of light amber honey with an excellent flavor. The honey granulates quickly, according to George H. Vansell in California, and frost-like crystals collect on the side of the extractor. There are persistent rumors that eating the honey from poison sumac will cure people who are allergic to its poison. In any case it is perfectly safe to eat the honey, which is generally classed as very good in quality.

Allen Latham in **Connecticut** kept records on sumac over a period of 40 years. He wrote me that from 1903 to 1930 sumac did well most seasons. One year in the middle 20's, his hive on scales began with a gain of 8 to 10 pounds a day which continued for several weeks. In a 12 day period from July 12 to July 23, the gain was 144 pounds and on the best day the colony gathered 22¾ pounds. Mr. Latham ended by saying, "I could ask for no better honey than sumac, I think it is far better than clover honey."

M. O. Traphagen of Hunter, **New York**, wrote that sumac blooms from July 10 to 25 and yields a pale yellow honey with a greenish color, very heavy body, superlative flavor, and delightful aroma. His largest surplus was 125 pounds for one colony with an average of 60 pounds. He adds, "According to comments of my retail trade over a 40-year period, this is the most delicious honey marketed in this area."

C. W. Wood of Copemish, **Michigan**, reports that in northern Michigan both the smooth and staghorn sumacs cover abandoned farms and burned-over areas, and are far more important than the average beekeeper suspects.

In **Texas** and the southwest, from the Colorado River to the Rio Grande, the Evergreen-Sumac or Kinnikinnick (**Rhus virens**) is often common and yields considerable honey. When I was in west Texas, we found this species abundant along the highways in early July but it was not yet in bloom. W. O. Victor of Uvalde gave me a sample of the honey from Evergreen Sumac and described the honey as a thick green amber honey resembling lubricating oil, and having a strong bitter flavor, good only for feeding bees. A. H. Alex wrote that beekeepers often move their apiaries to Kinnikinnick areas in the fall to obtain winter stores. My sample has not crystallized after 5 years and now has the taste of molasses, the bitter flavor having disappeared over the years.

Louisiana. A letter from Mr. Gayden Perkins of St. Francisville, dated March 12, states "At present my bees are working fruit bloom (most over), redbud, wild peach, cherry laurel, and yellow jasmine (which I believe is killing some of them). The willows and yellow poplar are about ready to bloom. By the way, in my locality everyone has camellias on their lawns from 10 to 100 in each of about 8 lawns within one mile of my apiary. These are worked by bees from November to about March 15 for pollen when the weather permits. I believe they are quite valuable." Mr. Perkins also speaks highly of ball clover as a new legume with possibilites. He planted a small acreage of it last fall. "I have a copy of your book on honey plants and have learned a great deal from it," he adds.

Florida and **Alabama.** I made a quick trip to Pensacola to spend the Easter weekend with my son who is in naval aviation, and noted that redbud was in full bloom in the southern states. In central Alabama peach orchards were pink with blossoms and I saw honeybees working the bloom. Crimson clover was just coming into bloom in southern Alabama, but honeybees were already visiting the brightly colored heads. I particularly observed jasmine vines in west Florida because the pollen (or nectar) is reputed to kill bees, but was unable to find a single bee working the large, yellow, fragrant flowers. This is no doubt fortunate for the beekeepers in the area, if the stories about its poisonous nature are true.

Spr

REMEM
a cur
and mol
it is to t
foods to
jaded ap
spring to
Nielsen
tasty ear
it is tear
"pepper-
Nielsen
type of r
retaining
ing heat.
a few dr
attractive

Rhubarb Bread 'N Honey Pudding.—Courtesy Kellogg Co.

Spring Tonic

MRS. BENJ. NIELSEN
Aurora, Nebraska

REMEMBER grandmother's choice of a cure-all for spring fever? Sulphur and molasses! Ugh! How much nicer it is to treat the family to fresh spring foods to pep up lagging energy and jaded appetites! One of the very nicest spring tonics we have enjoyed at the Nielsen house is that tart, indescribably tasty early grower, rhubarb. And, when it is teamed with honey, there's a real "pepper-upper". For several years the Nielsen family has enjoyed the ruby type of rhubarb—red clear through and retaining its lovely color through cooking heat. If this type is not available, a few drops of red coloring add a most attractive note.

Select firm stalks, do not peel. Cut off stems and leaves. Wash carefully and cut in about one-inch lengths. Place in sauce pan. To four cups prepared rhubarb, add one-half cup water. Cover. Bring to full rolling boil, then reduce heat and cook on simmer about five minutes. Add one-third to one-half cup honey, depending upon your taste. Simmer five minutes, covered. Skim and allow to cool in container in which it was cooked.

Oven baked rhubarb maintains its delicate pink color much better. To use this method, place cut rhubarb in casserole, add one-half cup water and one-

(Continued on page 304)

Who's Who in APICULTURE

To supply a handy reference of the names and addresses of state and provincial apiary inspectors, secretaries of beekeepers' associations, extension workers in beekeeping, and other information often needed by our readers we have corrected our Who's Who in Apiculture as of April 1, 1959.

STATE OR PROVINCE	BEES ON COMBS ADMITTED	NET WEIGHT LAW: EXTRACTED	NET WEIGHT LAW: COMB	INSPECTOR STATE OR PROVINCE	SECRETARY STATE ASSOCIATION
Ala.	No	Yes	Yes	C. A. North, Montgomery	F. E. Guyton, Auburn
Alba.	Cert.	Yes	No	J. W. Edmunds, Edmonton	Raymond Wood, Peace River
Ariz.	Cert.	Yes	Yes	Niles D. Benson, Phoenix	Clarence Benson, Phoenix
Ark.	Cert.	Yes	Yes	George W. Freeman, Little Rock	Mrs. Rea Davis, Little Rock
B. C.	No	Yes	Yes	John Corner, Vernon	John Corner, Vernon
Calif.	Cert.	Yes	Yes	Homer Len Foote, Sacramento	C. W. Beekman, Hughson
Colo.		Yes	Yes	Homer Powers, Denver	Harold Rice, Greenby
Conn.	Cert.	Yes	Yes	W. T. Brigham, New Haven	Mrs. Harry Powell, New Britain
Del.	Cert.	Yes	Yes	John W. Dukes, Dover	H. E. Milliron, Newark
Fla.	Permit	Yes	Yes	R. A. Martin, Gainesville	F. A. Robinson, Gainesville
Ga.	Permit	Yes	Yes	W. E. Blasingame, Atlanta	Warren Wilbanks, Claxton
Ida.	Cert.	Yes	Yes	James Allen, Middleton	Enior M. Nelson, Blackfoot
Ills.	Cert.	Yes	Yes	Carl E. Killion, Paris	Hoyt Taylor, Pleasant Plains
Ind.	Permit	Yes	Yes	Gilbert Perigo, Indianapolis	Gilbert Perigo, Indianapolis
Iowa	Permit	No	No	F. B. Paddock, Ames	Glen L. Stanley, Gilbert
Kans.	Cert.	Yes	Yes	R. B. Boren, Manhattan	Mrs. M. C. Mitchell, Altoona
Ky.	None	No	No	Vacant	Jas. R. Adams, Pleasure Ridge
La.	No	Yes	Yes	E. A. Cancienne, Baton Rouge	E. A Cancienne, Baton Rouge
Me.	Cert.	Yes	Yes	Reginald B. Swan, Brewer	C. A. Stanhope, Bradford
Man.	No	Yes	Yes	D. R. Robertson, Winnipeg	D. R. Robertson, Winnipeg
Mass.	Cert.	Yes	Yes	Milo Bacon, Boston	Wallace R. Parker, W. Boylston
Mich.	No	Yes	Yes	D. P. Barrett, Lansing	Margaret Seidelman, Ionia
Minn.	Cert.	Yes	Yes	C. D. Floyd, St. Paul	George Mc Reynolds, Clearbrook
Miss.	Permit	Yes	Yes	Homer Tate, State College	C. A. Wilson, State College
Mo.	None	Yes	Yes	Julius R. Anderson, Jefferson City	No association
Mont.	Permit	Yes	Yes	Lloyd N. Graham, Bozeman	Mrs. O. R. Burdett, Laurel
Nebr.	Cert.	Yes	Yes	C. J. Walstrom, Lincoln	Mrs. DeEtta Bellin, O'Neill
Nev.	No	Yes	Yes	Floyd Hilbig, Reno	No association
N. B.	Cert.	Yes	Yes	Adam J. Wilson, Fredericton	Walter Carlisle, Fredericton
N. H.	Cert.	Yes	Yes	James G. Conklin, Durham	Robert M. Clement, No. Weare
N. J.	Cert.	Yes	Yes	J. C. Matthenius, Phillipsburg	E. W. Sutvan, Laurel Springs
N. M.	Cert.	No	No	Donald D. Lucht, State College	Earl C. Edwards, Los Lunas
N. Y.	Cert.	Yes	No	A. C. Gould, Albany	Mary Cary Trippe, Syracuse
N. C.	Permit	Yes	Yes	J. F. Greene, Raleigh	S. C. Squires, Chapel Hill
N. D.	Permit	Yes	Yes	Dr. Jas. R. Dogger, Fargo	Dr. Jas. R. Dogger, Fargo
N. S.	No	Yes	Yes	E. A. Karmo, Truro	Philip Bishop, Sackville, N. B.
Ohio	Cert.	Yes	Yes	S. E. Bailey, Columbus	H. R. Swisher, Springfield
Okla.	Permit	Yes	Yes	Clyde Bower, Oklahoma City	Stanley Neel, Mangum
Ont.	Permit	Yes	Yes	P. W. Burke, Guelph	G. F. Townsend, Guelph
Oreg.	Cert.	Yes	Yes	Kenneth Goeden, Salem	Oliver W. Petty, Albany
Pa.	Cert.	Yes	Yes	George B. Sleesman, Harrisburg	A. R. Dean, Pittsburgh
P. E. I.	No	Yes		Dave MacLean, Charlottetown	W. A. Burns, Charlottetown
Que.	No	Yes	Yes	Jules R. Methot, Quebec	J. A. Prud'homme, Laprairie
R. I.	Cert.	Yes	Yes	Dr. Harry L. Hansen, Kingston	Mrs. May Murray, Warwick
Sask.	Permit	Yes	No	D. M. McCutcheon, Regina	D. Campbell, Tisdale
S. C.	Cert.	Yes	Yes	W. H. Purser, Clemson	E. T. Anderson, Lowrys
S. D.	Permit	Yes	Yes	Warren Miller, Pierre	Jack Dawson, Newell
Tenn.	Cert.	Yes	No	L. H. Little, Shelbyville	L. H. Little, Shelbyville
Texas	Cert.	Yes	Yes	C. J. Burgin, College Station	C. J. Burgin, College Station
Utah	Cert.	Yes	Yes	Dr. A. K. Kuttler, Salt Lake City	Marshall D. Levin, Logan
Vt.	Cert.	Yes	Yes	Robert M. Mead, White River Jct.	Wm. J. Domour, Bennington
Va.	Cert.	Yes	Yes	Henry W. Weatherford, Ver. Hill	Henry W. Weatherford, Ver. Hill
Wash.	Permit	Yes	Yes	Martin Peterson, Bow	Mrs. E. B. Purchase, Wapato
W. Va.	Cert.	Yes	Yes	O. M. Dick, Inwood	E. J. Harner, Martinsburg
Wisc.	Permit	Yes	Yes	John F. Long, Madison	L. Bruggeman, Menomonee Falls.
Wyo.	Cert.	Yes	Yes	C. A. Beavers, Powell	Walter Fleigner, Riverton

UNITED STATES — FIELD CROPS INSECTS AND BEE CULTURE RESEARCH BRANCH, Sloan E. Jones, Chief, Beltsville, Md.; BEE CULTURE SECTION, Clayton L. Farrar, Head, Univ. of Wisc., Madison, Wisc.; U. S. BEE CULTURE LABORATORIES: Tucson, Ariz., Univ. of Ariz., Frank E. Todd; Baton Rouge, La, Louisiana State Univ., Warren Whitcomb, Jr.; Beltsville, Md., Agric. Research Center, A. S. Michael; Logan, Utah, Utah State Univ., George E. Bohart, Laramie, Wyo., Univ. of Wyoming, John D. Hitchcock.

U. S. MARKETING AID — Commodity Stabilization Service, Sugar Division, U. S. Department of Agric., A. A. Greenwood, Washington, D. C.; Fruit and Vegetable Div., Marvin Webster, Wash., D. C.

DOMINION OF CANADA — INVESTIGATION AND DEMONSTRATION OF BEE CULTURE: No head has been appointed to date, Bee Breeding Station, Pelee Island, Ontario, Prof. G. F. Townsend in charge.

APIARY INSPECTORS OF AMERICA — President, C. J. Burgin, College Station, Texas; Secretary, Lloyd M. Graham, Bozeman, Mont.

AMERICAN BEEKEEPING FEDERATION — President, L. R. Budge, Malad, Iowa; Vice President, Henry W. Hanson, Dakota City, Iowa; Sec.-Treas., Joseph Moffett, Fort Collins, Colorado.

LADIES' AUXILIARY OF AMERICAN BEEKEEPING FEDERATION — President, Mrs. Thelma Littlefield, Pasadena, Calif.; Vice President, Mrs. Helen Partello, Boone, Iowa; Sec.-Treas., Mrs. Edna Huston.

BEE INDUSTRIES ASSOCIATION — President, Baxter Woodman, Grand Rapids, Michigan; Secretary-Treasurer, John Root, Medina, Ohio.

SOUTHERN STATES BEEKEEPERS' FEDERATION — President, Harvey York, Jesup, Ga.; Vice President Neil Miller, Selma, Ala.; Sec.-Treas., A. V. Dowling, Valdosta, Georgia.

EASTERN APICULTURAL SOCIETY — Pres., H. O. Boettcher, Amityville, L. I., N. Y.; Sec.-Treas., Mrs. Kenneth A. Manchester, Middlebury, Vt.; V. Pres., Henry B. Vail, Riverhead, L. I., N. Y.

AMERICAN BEE BREEDERS' ASSOCIATION — President, Warren Wilbanks, Claxton, Ga., Vice President, Eugene Jensen, Macon, Miss.; Secretary, Garnett Puett, Jr.; Hahira, Ga.

AMERICAN HONEY INSTITUTE — Director, Mrs. Harriett M. Grace, Madison, Wis.; T. W. Burleson, Waxahachie, Texas, Chairman of Board.

NATIONAL HONEY PACKERS AND DEALERS' ASSOCIATION — Pres., Ken Bradshaw, Wendell, Idaho; Sec.-Treas., Irvin Stoller, Latty, Ohio, Assistant Sec. Harold Clay, Washington, D. C. Directors are: R. B. Willson, R. H. Kelty, Jourdain Demuth, and T. E. Burleson.

HONEY INDUSTRY COUNCIL OF AMERICA — Pres., Kenneth Bradshaw, Wendell, Idaho; V. Pres., Millard Coggshall, Minneola, Fla., Secretary, L. H. Little, Shelbyville, Tenn.

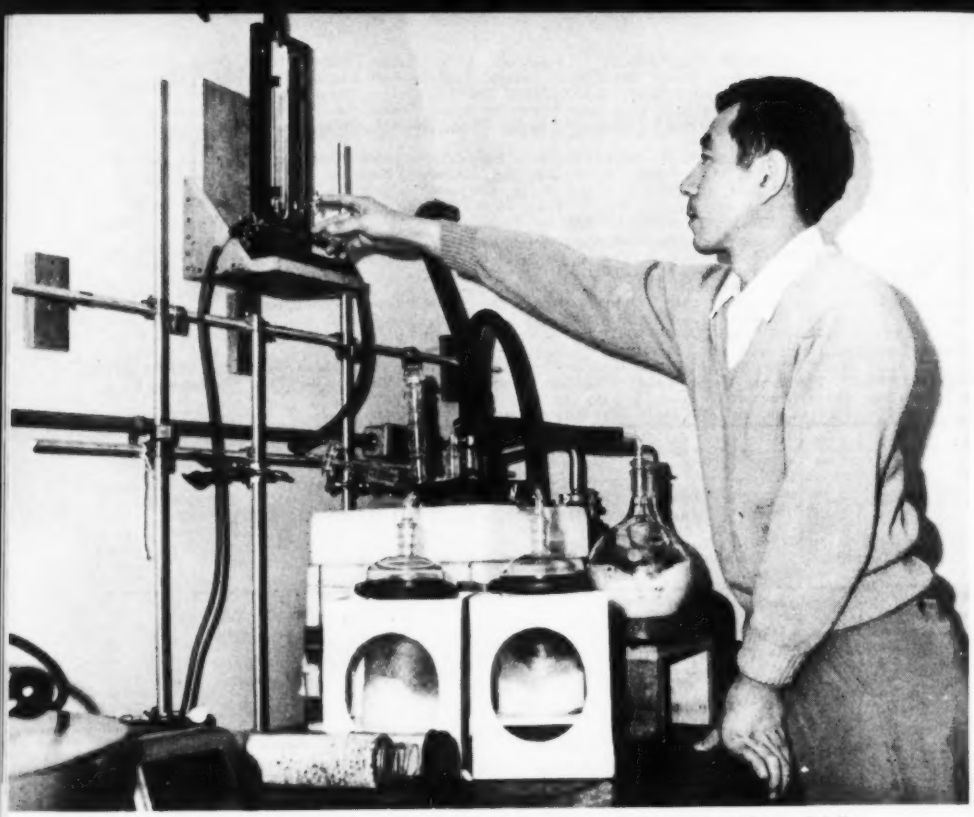
ROYAL JELLY RESEARCH FOUNDATION — Chairman, R. B. Willson, New York City, N. Y.; Secretary, George F. Hohmann, Napa, Calif., Treasurer, Leslie H. Little, Shelbyville, Tenn., Directors: E. B. Ault, Weslaco, Texas; Garnett G. Puett, Jr., Hahira, Ga.

1959 NATIONAL HONEY QUEEN — Miss Kay Seidelman, Ionia, Michigan.

STATE OR PROVINCE	BEEKEEPING TAUGHT IN AGRI. COL.	ANNUAL SHORT COURSE	PROFESSOR IN CHARGE OF BEEKEEPING COURSE	EXTENSION WORK CARRIED ON	EXTENSION PERSONNEL IN BEEKEEPING
Ala.	Yes		F. E. Guyton, Auburn	No	
Alba.	No			Yes	J. W. Edmunds, Edmonton
Ariz.	Yes		Frank E. Todd, Tucson	No	
Ark.	No			No	
B. C.	No			Yes	John Corner, Vernon
Calif.	Yes		J. Eckert, Davis	Yes	J. E. Eckert, Davis
Colo.	No			No	
Conn.	No			No	
Del.	No			No	
Fla.	Yes		Milledge Murphy, Gainesville	Yes	John D. Haynie, Gainesville
Ga.	No			No	
Ida.	No			Yes	Roland Portmen, Moscow
Ills.	Yes		V. G. Milum, Urbana	No	
Ind.	Yes		B. E. Montgomery, Lafayette	Yes	B. E. Montgomery, Lafayette
Iowa	Yes		Dr. Walter Rothenbuhler	Yes	R. B. Moorman
Kans.	Yes	Yes	R. B. Boren, Manhattan	Yes	R. B. Boren, Manhattan
Ky.	Yes		Lee Townsend, Lexington	No	
La.	No			No	
Me.	Yes		Charles O. Dirks, Orono	Yes	Chas. O. Dirks, Orono
Man.	Yes		D. R. Robertson, Winnipeg	Yes	D. R. Robertson, Winnipeg
Md.	Yes		George J. Abrams, College Park	Yes	Geo. J. Abrams, Col. Park
Mass.	Yes		Frank R. Shaw, Amherst	No	
Mich.	Yes		E. C. Martin, East Lansing	Yes	E. C. Martin, East Lansing
Minn.	Yes		M. H. Haydak, St. Paul	No	
Miss.	Yes		C. A. Wilson, State College	No	A. Bennet & D. Young, St. College
Mo.	Yes		L. Haseman & C. W. Wingo, Col.	Some	Stirling Kyd, Columbia
Mont.	No			No	
Nebr.	Yes		O. S. Bare, Lincoln	No	
Nev.	No			No	
N. B.	Yes		Adam J. Wilson, Fredericton	Yes	Adam J. Wilson, Fredericton
N. H.	Yes		Dr. Wm. R. Lee, Durham	No	
N. J.	Yes		Robt. S. Filmer, New Brunswick	Yes	Dr. Lee Merrall, New Brunswick
N. M.	No			No	
N. Y.	Yes		E. J. Dyce & R. Morse, Ithaca	Yes	Dr. Roger Morse, Ithaca
N. C.	Yes		W. A. Stephen, Raleigh	Yes	W. A. Stephen, Raleigh
N. D.	Yes		David M. Noetzel, Fargo	No	
N. S.	Yes		E. A. Karmo, Truro	Yes	E. A. Karmo, Truro
Ohio	Yes		W. E. Dunham, Columbus	Yes	Chas. A. Reese, Columbus
Okla.	Yes		G. A. Bieberdorf, Stillwater	No	
Ont.	Yes		G. F. Townsend, Guelph	Yes	G. F. Townsend, Guelph
Oreg.	Yes		W. P. Stephens, Corvallis	Yes	W. P. Stephens, Corvallis
P.E.I.	No	Yes	David McLean, Charlottetown	Some	Dave McLean, Charlottetown
Pa.	Yes	Yes	E. J. Anderson, University Park	Yes	W. W. Clarke, University Park
Que.	Yes		A. J. Plourde, Quebec	Yes	Rene Brasseur, Rue Craig, MTL.
R. I.	No			No	
Sask.	Ltd.		C. F. Patterson, Saskatoon	Yes	Provincial Apiarist
S. C.	Yes		W. H. Purser, Clemson	Yes	L. M. Sparks, Clemson
S. D.	Yes		R. J. Walstrom, College Station	No	
Tenn.	No			Yes	State Apiarist
Texas	No			Ltd.	State Inspectors
Utah	Yes		Marshall D. Levin, Logan	No	
Vt.	No			Some	Mr. Marchant, Burlington
Va.	Yes		J. M. Amos, Blacksburg	Part Time	J. M. Amos, Blacksburg
Wash.	No			Yes	Carl Johansen, Pullman
W. Va.	No			No	
Wisc.	Yes		C. L. Farrar, Madison	No	
Wyo.	No			Yes	Dr. Hitchcock, Laramie

Note: Where we did not hear from a state we repeated last year's listing.

Reprinted from the May 1958 issue of Gleanings in Bee Culture, Medina, Ohio



Some of the equipment Dr. Saburo Yamagishi of Japan uses in his work with royal jelly. He and Dr. Nevin Weaver hope to isolate the substance in royal jelly that makes queens.

The Mystery of Royal Jelly

A. B. KENNERLY
College Station, Texas

WHY CAN YOU feed royal jelly and grow a queen bee that would otherwise develop into a worker?

"We're searching for the answer to that question in the beekeeping laboratory in the Texas Agricultural Experiment Station, at Texas A. & M. College," says J. N. Weaver of the entomology staff.

To get the answer, Weaver makes extracts of royal jelly and tests these for their effects on producing queens rather than workers. The extracts that are active in doing this are then further extracted or broken down into parts and these parts again tested.

"We're hoping to eventually track down the substance in royal jelly that does the trick, then purify and identify it," Weaver explains. "It's entirely possible that it may be some substance with which we are already familiar."

Weaver is assisted by Dr. Saburo Yamagishi of Japan who will be in

Texas A. & M. College for a year. He is here as a post-doctorate fellow from the School of Pharmacy, University of Chiba, Chiba, Japan.

There has always been something mystifying about royal jelly that captures the imagination. Years ago, the keen aspiration was royal jelly for baby food.

Today, slender hopes strive for a place for royal jelly in face creams and cosmetics, for treating diseases and as a food supplement. Some vainly hope that in royal jelly they have at last ended the historic search for the fountain of youth.

"We are doing no research on food or medicinal values," Weaver is careful to point out. "We're trying to isolate that substance that gives royal jelly its value as a food for queen larva."

Although small amounts of a jelly-like substance are fed to worker bees in the larval stage, it does not contain that something that is found in royal jelly which is used to grow the queen.

"When we have discovered the all-important substance in royal jelly, the information will be helpful in examining the value, if any, of royal jelly to cosmetics, food and other products," Weaver predicts.

Does Anyone Know?

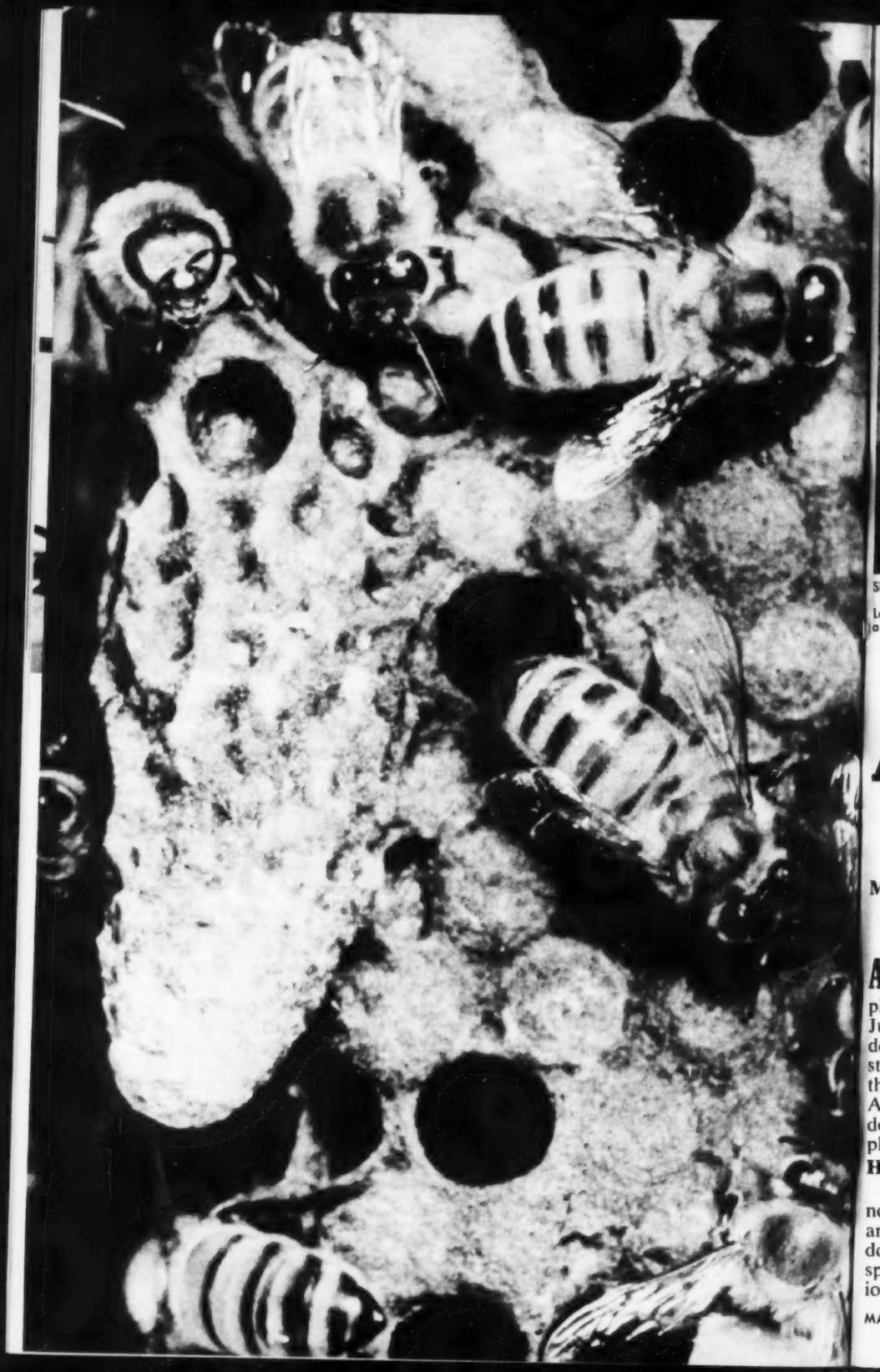
CHARLES J. KOOVER
Altadena, California

DOES ANYBODY KNOW how to overcome an allergy to bees? After a severe stinging I have become so allergic to anything that has to do with bees that even the odor of freshly extracted honey, the melting of beeswax, the odor of bees clinging to empty combs and the scraping of propolis from empty hive bodies, will cause me shortness of breath and consequently inability to sleep. Dr. Bodog F. Beck in his book on Bee Venom Therapy mentioned a case like mine where a person who had been severely stung had to give up not only working with bees, but couldn't work any longer in a warehouse where bee supplies were kept.

I have used all the different anti-histamine pills and they do help some. But they are no cure. They temporarily minimize the effect. The odor of a hive of bees 50 feet away from my bedroom window will keep me awake. The easy way out is of course not to keep bees. And since bees with me are only a hobby it doesn't cause a hardship. I have had bees for 20 years and at present have not a single hive around and I do miss my bees. The other day after two years of keeping away from bees I took a teaspoon of honey on a piece of bread, and sure enough the old symptoms came right back. Shortness of breath and no sleep that night.

Strange as it may seem stings do not cause any swelling for I have a skin immunity to bee venom. But after a severe stinging I became very ill and from that day on I have been allergic. And right here I would like to warn any and all beekeepers to avoid being stung unnecessarily for they may find themselves suddenly out of the bee business. Now that I am in this fix I find that there are others who had to give up keeping bees for the same reason. One man was stung very severely around the head and that was the end of his beekeeping. So there is a danger of an allergy to bees if the attack had no more serious consequences. If anyone knows of a remedy, drop me a line on a postcard and it will be greatly appreciated.

There is a complete answer to the problem in most cases, or partial in others, by taking a series of injections of the whole ground-up body of the bee. This will at least give sufficient protection to avoid a fatality if the injections are continued, and in many cases will overcome the problem almost completely. Any medical doctor can obtain the material with complete instructions from the Hollister-Stier Laboratories, who have offices in many parts of the United States, including one at 2031 N. 63rd St., P. O. Box 4520, Philadelphia 31, Pennsylvania.



Sky scrapers

Left—Portion
a capped c

A

M. J. DE

AT THI
pecially
plus hone
June and
doing all
strength
the major
Anderson
does take
plus hone

How to P

I like t
not theory
an experie
do with sp
spring and
ions young

Sky scrapers so populous in bees that some are lying out in front.

Left—Portion of a comb containing sealed worker brood, also a capped queen cell with a virgin about ready to emerge.

A Talk to Beekeepers

According to Dr. John Anderson of Scotland, "Surplus Bees Give Surplus Honey".

M. J. DEYELL

AT THIS SEASON of the year, especially in the north where the surplus honey comes from clovers during June and July, beekeepers should be doing all possible to increase the strength of colonies in readiness for the major honey flow. What Dr. John Anderson said is absolutely true. It does take surplus bees to produce surplus honey.

How to Produce Surplus Bees

I like to write from experience and not theory or hearsay, so I will relate an experience I had in 1955. It has to do with splitting strong colonies in the spring and giving the queenless divisions young laying queens, then uniting the divisions at the beginning of the main flow.

One of my yards was unusually populous in bees that spring. Some of the colonies had brood in from seven to twelve combs the last week in April. Something had to be done with the colonies or they would have swarmed during the spring honey flow. One reason they were so populous in bees was that I left an abundance of honey with the colonies the previous fall. That is one secret of success in having strong colonies in the spring.

I divided the strongest colonies on April 24. I believe in simplifying hive

(Continued on page 312)

NEWS and EVENTS

PACKERS DEFEAT MINNESOTA BEEKEEPERS' MARKETING BILL

The enabling legislation which was sponsored by the Minnesota Beekeepers' Association and co-sponsored by Representative Clarence G. Langley was rejected by the House Committee March 18.

Two Twin City packers bitterly opposed this legislation and carried on a mailing campaign and in other ways used every means within their power to defeat it.

If enacted into law it would have permitted the honey industry, beekeeper, beekeeper-packer and packer to levy a small sum against the gross sales of honey which would be used to advertise and promote honey and for research.

One bright spot in the horizon is the fact that through the efforts of the Minnesota Beekeepers' Association with the cooperation of Representative Clarence Langley a bill to increase the registration fee on bees one-thousand per cent was tabled and will be of no further worry during the next two years. Representative Langley a beekeeper himself has rendered the industry much assistance not only at this session but also in the past. A resolution unanimously passed by the members of the South-East Minnesota Beekeepers' Association at their Zumbrota meeting, April 4, 1959 follows:

Whereas:

The Minnesota State Beekeepers' Association, in good faith, sponsored legislation in the form of an enabling act which would permit the beekeepers of the state of Minnesota to elect a board who would levy a small sum to be used for the promotion of honey.

Whereas:

The cost of producing and marketing honey, has risen sharply while the price of honey has steadily decreased.

Whereas:

The packers, before a legislative committee stated that 50 to 75 per cent of the honey sold in Minnesota is packed out of state and that they, the packers, buy considerable honey from other states. Therefore, be it resolved that this organization, the South-East Minnesota Beekeepers' Association go on record favoring a more aggressive action to strengthen the honey market, opposing the action taken by the two Twin City Packers, and supporting and commending the action taken by the Minnesota Beekeepers' Association, their Legislative Committee, Executive Board and Representative Langley, who all contributed so much time and effort to its support.—F. Q. Bunch, Secretary.

WISCONSIN STATE
Southeastern District
Menomonee Falls
May 9, 1959

The Wisconsin State Southeastern District meeting will be held at Walter Diehnelt's "Honey Acres" at Menomonee Falls, May 9, 1959. Pot luck lunch. Meeting to start at 10 o'clock. John Long will give his inspection report also results of Fumidil B feeding. Henry Piechowski, state president, will bring us state news. Art Kehl, Midnite Starline Bees. We will also open hives of bees if weather is favorable.—Emerson Grebel, Chairman.

SUFFOLK COUNTY
Bee Club Meeting
Coram, Long Island
May 24, 1959

Gus Viohl and John Fielitz invite the Suffolk County Bee Club to meet at their bee yard on Coram-Mt. Sinai Rd., Coram, L. I., at 2:30 P.M., Sunday, May 24. At the meeting, a demonstration of the installation of package bees will be featured. Everyone interested in

beekeeping is cordially invited to attend and bring their questions on beekeeping to be answered.—H. D. Wells, Publicity Chairman.

OHIO

Logan County Beekeepers' Association

Logan County Beekeepers' Association of Ohio held their March meeting at the home of Mr. and Mrs. William Fry, Williams Rd., Bellefontaine, Ohio. Mr. R. L. Livermore of Belle Center, President, called the meeting to order. Old and new business was discussed. Mr. Elmer Smith of Benton Ridge, Ohio, a guest, and state bee inspector, commended a new member, Mr. Kinney, a vocational agriculture teacher, for his interest in bees as an agricultural project for his class of vocational agriculture boys. This is the second and third year for some of the boys. Mr. Smith also judged a baked goods display put on by the ladies. This display consisted of pies, cakes, cookies, and nut breads, using honey as the sweetening agent. The baked items were then auctioned off to the men to replenish the treasury. Mr. and Mrs. Smith also showed very interesting slides of bees, flowers, and his experiences as a state inspector. A question and answer period was held, followed by a social hour and refreshments by Mrs. Fry.—Mrs. Kenneth Buchenroth, Press Corres.

Beginning Beekeeping is the title of Circular A-310, just off the press, put out by North Dakota Agricultural College, Extension Service at Fargo. It is written by Dr. R. L. Post, Associate Entomologist, and Wayne J. Colberg, Extension Entomologist. The circular contains 12 — 8" x 11" pages of well illustrated material especially suitable for beginner beekeepers in the north who may wish to send for a copy.

SOUTH TEXAS

Second 1959 Beekeeping School
June 20, 1959

Over 150 beekeepers and their families turned out for the April 4th spring Beekeeping School sponsored by the South Texas Beekeeping Hobbyists. The large turnout prompted a repeat performance for 1-5 p.m., Saturday, June 20th. "Honey Handling Methods" will be the theme, according to Roland Sykes, Chairman of the Program Committee. San Antonio beekeepers were fortunate in getting successful radio and newspaper coverage announcing the school. The publicity resulted in actual television coverage during parts of the school. The TV film was then shown during the 10 p.m. News program the following Sunday evening. This was a wonderful boost for Central and South Texas beekeeping. Thanks to the hard work of Roland Sykes and his Committee, this free publicity was achieved.

Obituary

GEORGE T. MORE

MR. GEORGE T. MORE of Barre, Massachusetts, died February 23, 1959. He was 75 years old. He joined the Worcester County Beekeepers' Association August 24, 1936 and later served as President of that Association for three years. He was also a member of the Middlesex Beekeepers' Association. He served as President of the Massachusetts Federation of Beekeepers and in August 1957 was elected President of the Eastern Apicultural Society, but resigned because of poor health. He was active in church work, Men's Club, Kiwanis Club, and an enthusiastic beekeeper for over 50 years.

TEXAS

Rio Grande Valley Beekeepers Meet

The Rio Grande Valley Beekeepers' Association of Texas, held its annual all-day meeting February 19, featuring a panel on queen rearing with talks on the disease situation, moving bees and royal jelly developments. A color film was presented showing how beneficial insects can reduce the need for insecticides. A report on the annual American Beekeepers' Federation meeting at Tampa was given by J. D. Beal and G. C. Walker, Jr. Promoting the use of Texas honey was discussed by Walter Barth, A. I. Root Company. About 60 members and guests attended. At the business meeting, the following were elected officers: G. C. Walker, Jr., President; I. Gunter, Vice President; H. A. Thomas, Secretary-Treasurer.

MASSACHUSETTS

Middlesex County Beekeepers' Asso.
May 23, 1959
Weston, Massachusetts

The first 1959 outdoor meeting of the Middlesex County Beekeepers' Association of Massachusetts will be held on Saturday, May 23, on the estate of Mrs. Stephen S. Fitzgerald, 2 Newton Street, Weston at 2 P.M. Members will look through the hives of Mrs. Fitzgerald's apiary and the Club Hive will be inspected to see how it has progressed since the April meeting when it was installed. A business meeting will be held before the picnic supper. First prize winners of the Honey Cooking Contest were: Bread — Alfred Jetter, Candy — Earle Williams, Cake — Martha Jones, Cookies — Sam Dixon, Pie — Betty Carlson. —M. Southwick, Sec.

IOWA STATE COLLEGE

Short Course in Beekeeping
Ames, Iowa
May 12 and 13

The Short Course in Beekeeping at Iowa State College will be held on May 12 and 13 in the Memorial Union on the campus in Ames, Iowa. Mr. Henry Schaefer of Wisconsin will be the featured speaker on an unusually attractive program. The Department of Entomology and Wildlife is cooperating with the Short Course to present a public lecture by Dr. Martin Lindauer of Munich, Germany. Dr. Lindauer was

Ads in Gleanings have more FIREPOWER

Many of our readers wish they knew how to buy from you. The most inexpensive way to let them know is to advertise in Gleanings. For over 85 years Gleanings has been taking the work out of selling.

Be sure your "selling story" is in the next issue. Send for an advertiser's rate card today.

Gleanings in Bee Culture
Medina, Ohio

"Old Reliable" BERRY'S Italian Bees

THE PREFERRED STOCK OF LEADING HONEY PRODUCERS
Oldest Package Shipper South

America's Best Package Bees and Finest Queens. INSURE your honey crop with DEPENDABLE BERRY Bees (90% of our package bees are under 10 days old).
After 64 years of Select Breeding, we have settled on our strain of Italian bees as being unsurpassed by ANY stock, Hybrid or otherwise, in their relation to honey production, disease, and nosema resistance. We have bred repeatedly from MAJOR advertised strains, and abandoned them all as unequal to our "OLD RELIABLE" stock. "OLD RELIABLE" bees assure you that you have bought the best to be found, regardless of price. They are the Standard of the Beekeeping Profession, in leading honey producing areas. We maintain several branches in the Northwestern States that enable us to test our strain from both honey production and climatic standpoints. All this, along with Competent Breeding, assures you that when a better stock is produced, "OLD RELIABLE" will be the name.

PRICE LIST OF OUR QUEEN BEES AND PACKAGES OF BEES WITH YOUNG QUEENS

	Quantity	Queens	2-lb. w/q	3-lb. w/q	4-lb. w/q	5-lb. w/q
Prices through May 10th:	1-24	$1.40	$4.50	$5.60	$6.75	$7.85
	25-99	1.30	4.25	5.35	6.45	7.55
	100-up	1.20	4.00	5.10	6.20	7.30
Prices after May 10th:	1-24	$1.20	$4.00	$5.00	$6.00	$7.00
	25-99	1.10	3.75	4.75	5.75	6.75
	100-up	1.00	3.50	4.50	5.50	6.50

For prices on queenless packages, deduct $1.00 from price of queen; all prices F.O.B. Montgomery, Ala.

Directions telling how to handle and a Certificate of Health accompany all shipments. May we book your order NOW? Deposit of $1.00 per package required for booking. Remainder remittance in full ten days before shipping date.

References: Union Bank & Trust Co., Montgomery, Ala. Any Bee Journal in the United States or Canada. Ask your Extension Agent about us.

M. C. BERRY & SONS
P. O. BOX 684 MONTGOMERY, ALABAMA

a former student of Dr. Karl von Frisch. The subject of his lecture, which will be given May 12, at 7:30 P.M. in MacKay Hall South Wing Auditorium, is "Some Aspects of the Evolution of the 'Bee Language'". Beekeepers, and all other people interested in recent research on bee behavior, should avail themselves of these opportunities.—F. B. Paddock, Iowa State College.

TENNESSEE

McMinn Co. Beekeepers' Association
Athens, Tenn.
June 10, 1959

The McMinn County Beekeepers' Association will hold its next meeting June 10, at the home and apiary of Mr. Henry Gilbert, Athens, Tenn. at 2:00 P.M. There will be discussions on harvesting, marketing, and the storage of honey. Those interested in Apiculture are invited to attend. Some state officials will be present.—R. R. Malone, Secretary.

HOMAN'S
Quality Bred Caucasian or Italian Bees & Queens

2 lb. w/q	3 lb. w/q	4 lb. w/q	5 lb. w/q	QUEENS
$3.75	$4.75	$5.75	$6.75	$1.15

Prices after May 15th

2 lb. w/q	3 lb. w/q	4 lb. w/q	5 lb. w/q	QUEENS
$3.40	$4.40	$5.40	$6.40	$ .75

All queens postpaid airmail. Health certificate and live arrival guaranteed. Phone: PO 7-3880.

HOLDER HOMAN
SHANNON, MISS.

Be assured of greatest honey crop available by using linebred young Caucasian or Carniolan laying queens. Bred for gentleness, honey-gathering and reproduction characteristics.

Air Mail	1-49	50-99	100 up
Queens	$1.45	$1.35	$1.25

$2.25 to Foreign Countries
Clipped or marked 10 cents extra.

No package bees this season.

W. D. REAMS
Box 458 La Belle, Fla.

SPRING TONIC

(Continued from page 293)

fourth to one-half cup honey. Cover. Cook in moderate oven, 350 degrees F. until tender, about 30 minutes.

May you enjoy these, too.

Rhubarb Bread 'N Honey Pudding

One-fourth cup shortening, ⅓ cup honey, ½ teaspoon vanilla, ½ teaspoon nutmeg, 2 eggs, 1½ cups ½-inch toasted cubes, 2 cups corn flakes, 4 cups diced fresh rhubarb and ¾ cup honey.

Blend shortening, honey, vanilla, and nutmeg; add eggs and beat well. Stir in bread cubes and corn flakes. Spread rhubarb in baking pan and drizzle with honey. Cover with corn flakes mixture. Bake in moderate oven, 350 degrees F. 40-50 minutes or until rhubarb is done. Serve warm. Yield: 6-8 servings (6 x 10 x 2-inch pan).

Honey Rhubarb Sherbet

Two and ½ cups sliced rhubarb, 1 can crushed pineapple, (1⅓ cups), ⅛ teaspoon salt, ⅓ cup honey, 1⅔ cups evaporated milk, chilled and ⅛ teaspoon nutmeg.

Wash rhubarb; do not peel; cut into small pieces and combine with pineapple, salt and honey. Simmer until tender. Press through coarse sieve. There should be 2 cups pulp and sirup. Chill. Whip milk until very stiff, fold in rhubarb mixture and pour into freezing tray of refrigerator. Freeze until firm. Serves 10.

Thirst Quencher

One and one-half cups honey, ½ cup water, ⅛ teaspoon salt, 2 cups rhubarb juice, 2½ cups unsweetened pineapple juice, juice of 2 lemons, 1 quart ginger ale.

Combine honey, water, salt, rhubarb juice, pineapple juice and lemon juice. Chill. Add ginger ale just before serving. Pour over crushed ice in tall glasses. Garnish with sprig of mint, if desired.

LITTLE'S
ITALIAN QUEENS

1 to 24	$1.45
25 to 99	1.35
100 and Up	1.25

Until June 15

ROYAL JELLY

Bulk & Capsules Write for Prices

LITTLE'S APIARIES
Shelbyville, Tennessee

California Caucasians

Gentle and industrious Caucasian queens. Hastings strain used for breeders. Bred for greater honey production. Gentleness, highly prolific. No excessive propolis. Swarm control and color. Some package bees. 10% books your order — balance two weeks prior to shipment. Air Mail. Start about April 10th. We do not clip or mark.

1 to 24 ..... $1.50 25 to 99 ..... $1.35 100 & up $1.20

After June 1st

1 to 24 ..... $1.30 25 to 99 ..... $1.15 100 & up $1.00

QUALITY AND SERVICE DOESN'T COST — IT PAYS

DON J. STRACHAN **Yuba City, Calif.**

Rt. 2, Box 83 Phone Sherwood 23881

BETTER BRED QUEENS **THREE BANDED ITALIANS**

Bees! Bees! Bees! Plenty of bees and queens!
We can make prompt shipment of our Better Bred Stock.

	Queens	2 lb. w/q	3 lb. w/q
1 to 24	$1.40	$4.25	$5.35
25 to 100	1.15	3.75	4.75

AFTER MAY 15th

2-lb. pkgs. w/q, $3.25 any quantity
3-lb. pkgs. w/q, 4.25 " "
Queens .75 " "

CALVERT APIARIES **Calvert, Ala.**

ITALIAN QUEENS & NUCS
Queens, 1-10, $1.35 10-25, $1.15
25 or more $1.00
Will lend my queen raising film ready for showing April 15th.
L. E. FROEHNER
3610 Bolin Street Houston 24, Texas

HONEY WANTED
Cut Comb and Extracted
Advise what you have
T. W. BURLESON & SON
WAXAHACHIE, TEXAS

ITALIAN BEES AND QUEENS
2 lb. with queen $3.75
3 lb. with queen 4.75
4 lb. with queen 5.75
Queens 1.20
Liberal overweight, good bees, and satisfactory service, I will try to give.
RAYMOND McFARLING
Rt. 3 Tupelo, Miss.

CANADA'S
National Monthly Magazine for Beekeepers
Canadian Bee Journal
Streetsville, Ontario, Canada

PACKAGE BEES NUCLEI QUEENS
CAUCASIAN ITALIAN
To reduce the risk get the best. We aim to give you the best, skill and experience can produce. Call, write, or wire
Price of Package Bees Includes Queens.
QUEEN PRICES: 1-24 ..... $1.60 25-99 ..... $1.55 100 up $1.50
MIDNITE QUEENS ..... $1.70 each

PACKAGE BEE PRICES:	2 lbs.	3 lbs.
1-24	$4.70	$5.95
25-50	4.20	5.40
51 and up	4.10	5.30

THE COFFEY APIARIES WHITSETT, TEXAS
Express Office and Western Union: Three Rivers, Texas. Tel. Campbellton 72525.

QUALITY LEATHER ITALIANS
SINCE 1930

Until June 1st Queens 1 to 25 .....$1.00
26 & Up ..... .90 ea.
After June 1st Queens 1 to 25 ..... .85
26 & Up ..... .65 ea.

* AIR MAIL *
Satisfaction Guaranteed

We are prepared to ship your unexpected requirements.
Phone No. MUarray 4-2759

O. K. ANDERSON & SON
Post Office Box 193 Coffee Springs, Ala.

QUEENS are now available

The package rush is about over and we can accept orders for queens.

Prices:	Regular to May 20	after May 20
1-24	$1.50	$1.20 each
25-99 ...	1.40	1.10
100 up ..	1.30	1.00
Island Hybrid		
	to May 20	after May 20
1-24	$1.80 ea.	$1.50 each
25-99 ...	1.70	1.40
100 up ..	1.60	1.30

Refer to earlier ads for package prices. After May 10th deduct 75¢ per package.

Rossman Apiaries

P.O. Box 133, Moultrie, Ga.

QUALITY BRED ITALIAN QUEENS

All breeder queens selected from our Northern Apiaries for Hardiness and Honey production. All queens shipped Air Mail. No queens shipped out of Continental USA and Canada.

May queens	**$1.25 each**
June through Sept.	**.75 each**
Oct. and Nov.	**1.00 each**

Walter D. Leverette Apiaries
P. O. BOX 364 FORT PIERCE, FLA.

NORMAN BROS.
BEES & QUEENS
Bright 3-Banded Italians

For fine quality bees and dependable service. Place your order with us. Full weight, safe arrival, health certificate and satisfaction in U.S.A. and Canada.

38 Years as Shippers

— PRICES —	1 to 11	12 to 100
2-lb. pkg. with queen	$4.00	$3.75
3-lb. pkg. with queen	5.00	4.75
Untested queens	1.10	1.00
Tested queens	2.00	1.75

Package bees F.O.B. express. Shipped parcel post by request. Add postage.

NORMAN BROS. APIARIES
RAMER, ALA.

Asked & Ans

The Use of Queen and Drone Traps

Q. Is it advisable to use these on hives during the entire bee season to prevent swarming?

A. Using queen and drone traps on all of your hives to prevent swarming, would hardly be advisable, unless they are put on for a short time during the height of the swarming season. You would need to visit your yard each evening to see if any colonies had tried to swarm and this could be determined by finding the queen in the upper compartment of the queen and drone trap. You would then have to destroy all queen cells and perhaps remove a few combs of brood from the brood chamber and put these combs in one of the supers above, in order to relieve congestion in the brood chamber below. If you would leave queen and drone traps on the hives during the entire season, some colonies might become hopelessly queenless, because, the queens not being able to pass through the traps would likely be killed by virgin queens that emerged from queen cells. These virgin queens, not being able to leave the hives to mate, would eventually be destroyed and therefore, your colonies would become hopelessly queenless.

Working for Increase of Colonies Rather Than Surplus Honey

Q. How can I increase the size of my apiary this coming season without buying more bees?

A. If you are interested in increasing the size of your apiary rather than honey production, one good way to do this is to divide your strongest colonies at the beginning of the major honey flow in your locality. If your colonies occupy double brood chambers, the upper chamber containing the queen and most of the brood can be lifted onto a bottom board a short distance from the parent stand and given a hive cover. The hive body left on the parent stand should contain a few combs of brood from which the bees will rear a young queen. They will do this in 21 days. Most of the old bees in the hive placed on the bottom board will return to the parent stand. During a season favorable for honey production, most divisions should produce some surplus honey. You can, of course, introduce

young layin
left on the
be introduce
ey flow tha
of nectar.

Sugar Syrup Rearing Bro

Q. Is there
between sugar
brood rearing?

A. I doni
dence that
and pollen
on honey
when there
will frequer
would be
not live as
ed bees.
feeding sug
abundant h
fact that th
enough sug
requirement
more it is
one conside
honey remo
Certainly i
to convert
stores.—C.
ture Sectio

Knowing t

Q. I hear
I'm not sure
occurring.

A. Whe
the bees yo
at hive en
hive entra
closely you
and circle
then take
source of
sumed tha
come orie
their hive
fields. Be
the alighti
the hive
During a
nectar, b
may hove
hives be

& Answered

young laying queens to the divisions left on the parent stands. Queens can be introduced more easily during a honey flow than they can during a dearth of nectar.

Sugar Syrup vs Honey for Rearing Brood

Q. Is there any difference in results obtained, between sugar syrup and honey as food for brood rearing?

A. I don't believe there is any evidence that brood reared on sugar syrup and pollen will differ from bees reared on honey and pollen. Brood reared when there is a deficiency in pollen will frequently be undersized, and it would be safe to assume they would not live as long as would well developed bees. The principal objection to feeding sugar syrup in place of leaving abundant honey stores results from the fact that the beekeeper seldom provides enough sugar syrup to get the optimum requirements of the colony. Furthermore it is probably not economical if one considers the cost of handling the honey removed and the cost of feeding. Certainly it will take some bee energy to convert sugar syrup into useable stores.—C. L. Farrar, Head, Bee Culture Section.

Knowing the Honey Flow

Q. I hear beekeepers talk about honey flows. I'm not sure I can tell when a honey flow is occurring.

A. When nectar is being gathered by the bees you will notice unusual activity at hive entrances. Bees will fly from hive entrances and if you watch them closely you will notice that they fly up and circle around two or three times, then take off in the direction of the source of nectar or pollen. It is assumed that bees do this circling to become oriented so that they can identify their hives after returning from the fields. Bees loaded with nectar land on the alighting board a few inches from the hive entrance and walk in slowly. During a dearth or partial dearth of nectar, bees returning from the fields may hover up and down in front of hives before entering.

DADANT'S STARLINE
OUR REGULAR STOCK
Good honey getters and very gentle.
A pleasure to own.

	1-25	25-100	100 up
2-lb. w/q	$4.50	$4.25	$4.00
3-lb. w/q	5.70	5.45	5.20

For larger packages add $1.10 per pound.
If shipped by P.P. add $1.50 per package.
Untested qns. $1.45 $1.35 $1.25
Tested qns. 2.50 each
The prices above are for our regular stock. For Dadant's Starline add 30¢ per package or queen.
Add 10¢ for clipping and painting queens.

ALAMANCE BEE COMPANY
GEO. E. CURTIS & SONS
La Belle, Fla. Box 525

The McVAY'S of ALABAMA
Offer GOOD PACKAGES with
GOOD QUEENS at the RIGHT PRICE
40 Years of Profitable Beekeeping Behind Us

PKGS. W/Q	1-24	25-99	100-up
2-lb.	$4.50	$4.25	$4.00
3-lb.	5.70	5.45	5.20
QUEENS ONLY — POSTPAID	$1.45	$1.35	$1.25

Order direct from this ad.
We are DUN & BRADSTREET rated
J. F. McVAY
JACKSON ALABAMA

Hardy Northern Bred Italians
HOLLOPETER'S BEST
Queens ..... **$1.50 each**
June to November. No package bees.
WHITE PINE BEE FARMS
ROCKTON, PA. BOX 810

Italian Queens

1 to 9	$1.50 ea.
10-24	1.25 "
Over 25	1.00 "

Postpaid — Airmail
Live Delivery Guaranteed

John S. Shackelford
Rio Oso, Calif.
Phone: Wheatland,
NEptune 3-2392

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 18c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month, preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. HUBBARD APIARIES, ONSTED, MICHIGAN.

IOWA honey, one can or truck loads. RUSSELL D. SMALLEY, BEAVER, IOWA.

CLOVER extracted honey in sixties. ABRAM BRUBAKER, RT. 2, LANCASTER, PA.

TUPELO, wild flower in 60's. Honey candy. LANCASTER COUNTY DUTCH GOLD APIARIES, 910 State Street, LANCASTER, PA.

15 TONS Hubam Clover Honey in 60's. WINKLER FARM, MOODY, TEXAS.

CLOVER HONEY in 60's, one can or carload. VANDERFORD-HINKLE APIARIES, 701 South Main, ELLENSBURG, WASH.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We cannot guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C.O.D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED—All grades of extracted honey. Send sample and price. DEER CREEK HONEY FARMS, LONDON, OHIO.

CASH FOR BEESWAX. Write as to quantity and we will quote price. MUENCH-KREUZER CANDLE CO., INC., SYRACUSE, N. Y.

WANTED—White extracted or comb honey. Send sample. MILLERSPORT HONEY CO., MILLERSPORT, OHIO.

BEESWAX WANTED—Highest prices paid in cash or trade for bee supplies. THE A. I. ROOT COMPANY, MEDINA, OHIO; COUNCIL BLUFFS, IOWA; SAN ANTONIO, TEXAS.

WRITE FOR SHIPPING TAGS and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 per cent saving. WALTER T. KELLEY CO., CLARKSON, KY.

WANTED — Light amber clover, fall flowers, buckwheat and white clover. Send sample and lowest price. CLOVERDALE HONEY CO., FREDONIA, N. Y.

WANTED—Buckwheat and light amber honey. EASTERN FOOD PRODUCTS, 421 BEDFORD AVE., BROOKLYN, N. Y.

WANTED, chunk comb and extracted honey. Mail sample and price. STOLLER HONEY FARMS, LATTY, OHIO.

HONEY WANTED for bottling, bakers including buckwheat. All types, in tins or drums, trailer loads. Send samples representing each lot. ALSO ROYAL JELLY. Write CHAS. E. FARRIS CO., 99 HUDSON ST., N. Y. City. Established since 1910.

WANTED—Honey in 60 pound cans, also beeswax any quantity. L. E. ALLEN, TIPTON, MICH.

WANTED WHITE Honey—Cans or drums. HUBBARD APIARIES, ONSTED, MICHIGAN.

WANTED EXTRA LIGHT Amber Honey—Cans or drums. HUBBARD APIARIES, ONSTED, MICHIGAN.

WANTED AMBER Honey—Cans or drums. HUBBARD APIARIES, ONSTED, MICHIGAN.

We render cappings, old combs and buy your beeswax. Shipping tags sent on request.—M. R. CARY CORP., 219 WASHINGTON SQUARE, SYRACUSE 8, N. Y.

WANTED: Honey—water-white, light amber and buckwheat extracted and comb. Send samples and prices. M. R. CARY CORP., 219 Washington Square, SYRACUSE 8, NEW YORK.

FOR SALE

WRITE FOR CATALOG—Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. HUBBARD APIARIES, Manufacturers of Beekeepers' Supplies and Comb Foundation, ONSTED, MICHIGAN.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., CLARKSON, KENTUCKY.

QUEENBEE PAINTING OUTFITS, $1.50. INTERLOOKERS, $3.00 postpaid. SOUTHWICK APIARIES, WABAN, MASS.

FREE CATALOG—Cypress bee hives and bee supplies. Save up to 40% on hives that last, for less. MYERS CRAFT MANUFACTURING CO., BURGAW, NORTH CAROLINA.

HONEY—In any size container, also Mail Order Dealer for Bee Supplies. Write for prices. L. E. ALLEN, TIPTON, MICH.

USED EXTRACTORS, tanks, pumps and other honey house equipment. HUBBARD APIARIES, ONSTED, MICHIGAN.

SHOP WORN EQUIPMENT. Send for list. All serviceable for many years. HUBBARD APIARIES, ONSTED, MICHIGAN.

OVERSTOCKED on Medium Brood Foundation. 7-8 sheets per lb. All double boxed and papered. Also zinc excluders. HUBBARD APIARIES, ONSTED, MICHIGAN.

PACKAGE BEES and QUEENS from the best shippers in the South. Guarranteed quality. Plenty of open dates. HUBBARD APIARIES, ONSTED, MICHIGAN.

FOR SALE—Thousands empty 60's, once used, 25¢, more than once used, 15¢. All nice inside. HONEYMOON PRODUCTS COMPANY, 39 E. Henry Street, RIVER ROUGE, MICHIGAN.

SUGAR BY THE BAG or truckload. Good stock at all times for bee feed. HUBBARD APIARIES, ONSTED MICHIGAN, Phone HO 1-3481.

FOR SALE—House, five rooms and bath, 150 colonies and extracting equipment. E. M. PETERSON, R. 1, BONDUEL, WISC.

SULFA, TM-5, TM-25 for AFB and EFB. Ask for our low bulk prices. HUBBARD APIARIES, ONSTED, MICHIGAN, Phone HO 1-3481.

FOR SALE—40 second hand beehives. Good condition. Write for particulars. FRED BRIGGS, NEW SHARON, IOWA.

NEW 8-frame stoller spacers, 7-comb spacing, bargain. M. MELVIN CELORON, N. Y.

FIFTY COLONIES in two stories. Inspected. GEORGE CARTER, 302 Ashburton, COLUMBUS, O.

FOR SALE—Used 60-pound honey cans, 15¢ each, f.o.b. HONEY PROCESSORS, INC., FREEVILLE, NEW YORK.

SAVE—buy direct from factory, white pine supers, standard dovetail construction 9⅝ depth, $1.20, 6⅝ depth 95¢. Quantity discount. KEHM BROS. APIARIES, Airport Bld. T-112. Mailing address, 222 East 7th, GRAND ISLAND, NEBR.

BRAND NEW NYLON STOCKINGS: factory rejects. Make excellent honey straining bags. 25¢ each, 5 for $1.00, postpaid. PAUL LAMIE, LAKE LEELANAU, MICH.

EQUIPMENT to operate 1200 hives with 30 locations, including 1 Bogenshutz uncapper, 3 large extractors complete with motors, honey pumps, steam boiler, stoker, 10 various sizes honey tanks, including 2 mixing tanks, 4 tanks equipped with steam coils, various other items. Real estate on new highway 27, in one of Michigan's best clover sections. Sell all or part. ARCHIE KAUFFMAN, 5211 Perry Rd., GRAND BLANC, MICH.

FOR SALE—550 colonies, complete equipment. Will sell all or part. DON BARRETT, Rt. 2, SHEPHERD, MICHIGAN.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CARNIOLAN and CAUCASIAN Bees for 1959. Booking queens. Each, $1.00; 2-pound bees with queen, $4.00. 3-pound bees with queen, $5.00. LEWIS & TILLERY BEE CO., RT. 3, BOX 251, GREENVILLE, ALABAMA.

PACKAGE BEES & QUEENS, two and three frame nuclei by truckload, queenless packages and frame brood and bees. G. C. WALKER, Box 894, PHARR, TEXAS.

DADANT STARLINE HYBRID QUEENS, personally reared, 35 years experience, $1.70 each, airmailed. S. J. HEAD, CROSSETT, ARKANSAS. Book early.

THREE BAND ITALIAN and CARNIOLAN BEES. 3-lb. with queen, $5.00; 5-lb., $6.80; queens, $1.25. LUTHER PICKETT, EFLAND, N. C.

THE NORMA ROY APIARY Italian Bees, 4 lbs. with queen, $5.15; 3 lbs. with queen, $4.40. Live delivery and a health certificate with shipment. NORMA E. ROY & SON, HESSMER, LOUISIANA.

FOR SALE—300 colonies of bees complete with combs in 19 locations. Also other equipment. Write MRS. RAY C. WILCOX, ODESSA, N. Y.

DARK ITALIANS Bred for PRODUCTION. Bees, 3-lb. pkg. with queen, $4.00. Queens, $1.00. HENRY LOEHR, CALDWELL, TEXAS.

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

NORTHERN CALIFORNIA BEES & QUEENS

We are proud to announce that we have added

Dadant Starline Queens

to our line of leather-colored

Italian Queens

which we have developed during a 32-year breeding program. With 9000 nuclei, 2 good queen men and the cooperation of our weatherman we will have plenty of queens at the following prices:

	Italian	Starline
April 1 to May 5		
1-10	$1.50	$1.80
10-25	1.35	1.65
over 25	1.20	1.50
After May 5		
1-10	$1.50	$1.80
10-25	1.25	1.55
over 25	1.00	1.30

Place your order with us and be assured of top quality queens and prompt, courteous service.

GEO. E. SMITH & SON

Rt. 4, Box 59, Yuba City, Calif.

"SWARMING STOPPED COLD"

95% Foolproof

No Gimmicks
No Gadgets
No Tricks

Bigger Crops - Better Beekeeping
Full Directions Price $1.00

BAKER'S APIARIES

Glencoe Illinois

WANTED

WANTED 2 men to work in our apiaries. Five day work week. Top wages. Bonus. Other advantages. SCHULTZ HONEY FARMS, RIPON, WIS.

WANTED—BEES and used equipment for our western customers. HUBBARD APIARIES, ONSTED, MICHIGAN.

WANTED: 1000 colonies on share or lease basis. Have locations and extracting equipment. DOYLE O. FULLERTON, Box 44, TUTHILL, SO. DAKOTA.

WANTED—Superior 4 or 8-frame extractor. CARIB-BEE APIARIES, Box 876, CHRISTIANSTED, ST. CROIX, U. S. VIRGIN ISLANDS.

SEEDS

HONEY PLANTS our specialty. Catalog on request. PELLETT GARDENS, ATLANTIC, IOWA.

ROYAL JELLY

ROYAL JELLY capsules (with added vitamins) 25 mg. box of 30, $2.15, 50 mg. box of 30, $3.50. New Pack (without vitamins) $7.50 per 100. Beauty Cream, 2 oz., $2.00. PRAIRIE VIEW HONEY CO., 12303 Twelfth Street, DETROIT 6, MICH.

ROYAL JELLY—$12.00 per ounce, postpaid. Write for prices in large lots. THE STOVER APIARIES, MAYHEW, MISS.

SUPER STRENGTH 100 mg. Royal Jelly capsules in bottles of 100 for $10.00. PRAIRIE VIEW HONEY CO., 12303 Twelfth St., DETROIT 6, MICH.

ROYAL JELLY—By ounce or pound. Write for prices. R. B. HERIER, 246 Tecumseh Rd., SPRINGFIELD, OHIO

MISCELLANEOUS

BEES REMOVED from house or tree or hive without touching either house or bees. Bees will then move honey into hive. Save property, honey, and bees with my method. Send $2.00 for details. Satisfaction guaranteed. GEORGE HAWKINS, RT. 1, LAWSON, MO.

1958 edition of our 112-page book "HOW TO KEEP BEES AND SELL HONEY" contains over 175 clear, sharp pictures and drawings, explains in easy to read style all you need to know to make beekeeping pleasant and profitable. Includes hitherto secret information on how to build low cost hot box to liquefy ten 60-pound cans of granulated honey over night, how to prepare wax for market and fairs, and how to make creamed honey. 75¢ postpaid. WALTER T. KELLEY CO., CLARKSON, KY.

WILL SHIP BEES in your cages, 70¢ pound, after May 15th. Can supply new cages. A. V. DOWLING, VALDOSTA, GA.

MAGAZINES

THE SCOTTISH BEEKEEPER (The official organ of the Scottish Beekeepers' Association.) Scottish in character, international in appeal. Annual subscription $2 post free. Sample copy from ROBERT N. H. SKILLING, F.S.C.T., 87 KING STREET, KILMARNOCK, AYSHIRE.

Archiv fur Bienkunde, International journal for Bee Culture and beekeeping economics. Founded in the fall of 1918. Oldest economic bee journal in the world. Praised again and again for its decades of independent leadership through many endorsements and advice as a valuable source also for the practice. Classic. Yearly DM 5.50. Any aspiring beekeeping friend will receive a sample copy. BIENE-VERGLAG, GIELBACK, LINDAU, GERMANY.

BEE WORLD, the international journal of the Bee Research Association published monthly, contains the latest research reports on bees and beekeeping. With Apicultural Abstracts it costs $5.50 per annum, or $6.00 including membership of the Bee Research Association. Apicultural Abstracts only $4.50 per annum from the Hon. Subscription Secretary, Bee Research Association, 10 BARNETT WOOD LANE, ASHTEAD, SURREY, ENGLAND.

GOAT MILK—Healthful food, profitable business, learn how. Monthly magazine $2. yearly. DAIRY GOAT JOURNAL, COLUMBIA T3, MO.

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, Box 189, San Angelo, Texas, the only ranch magazine published serving the Angora Goat Industry. Subscription $3.00. Sample copy 25c.

AFRICAN BEEKEEPING, successor to the S. A. Bee Journal, monthly, sub. 10/- per annum. THE EDITOR, P.O. Box 201, Port Shepstone, Natal, South Africa.

BEE JOURNAL of INDIA, published monthly in English. Subs. Rs. 12/-or Sh. 17/6d (starting) or $2.75 per year per International M.O. Sample copy 2s, or 25 cents. Can be had from: The Bhupen Apiaries (Himalayas), Ramgarh, Dist. Nainital, U. P., India.

MODERNIZE YOUR HIVE WITH

Price $4.98 Postage not included

Patent No. 2,811,727

A device fitting between the brood chamber and supers, it serves as a queen excluder and bee robber. The bee robber allows the apiarist to turn handles and remove 3 to 10 frames of honey, which may be BEE FREE in approximately 24 hours. The super may be divided into two or more sections. This enables you to rob PART or ALL the hive at one time. Standard 10 frame — state type — full depth, shallow and comb honey.

For additional information write:

A. W. FASKE
Borden, Indiana

Exchange Your Beeswax For Foundation
Write for Price List.
WAX WORKERS, INC.
1330 Slaterville Road Ithaca, N. Y.

EBY'S – PERMANENT – FOUNDATION

"MAKES WIRED FOUNDATION OBSOLETE"

Patent Pending No. 791,627

NO WIRING NEEDED—PERMANENT DURABILITY—NON-SAGGING—MAXIMUM DRONE CONTROL—RAPID ACCEPTANCE BY BEES—CAN BE SHIPPED IN HOT OR COLD WEATHER

Size	Sheets per lb.	10 Sheets	50 Sheets	25 Lbs.	Prices are F.O.B. West Elkton, Ohio
8½ x 16¾	7	$2.40	$10.75	$37.25	Prices on larger
5⅝ x 16¾	11	1.85	7.95	37.50	quantities by request.

HYLAND APIARIES, INC. — WEST ELKTON, OHIO

FLOWERS' QUALITY ITALIANS
THAT WILL STAND THE TEST FOR HONEY GATHERERS:

	1-9	10-49	50 up
2 lb. pkg. with young laying queen	$3.75	$3.50	$3.25
3 lb. pkg. with young laying queen	4.75	4.55	4.25
4 lb. pkg. with young laying queen	5.75	5.55	5.25
5 lb. pkg. with young laying queen	6.75	6.55	6.25
QUEENS (Untested)	1.00	1.00	1.00
TESTED QUEENS	2.00	2.00	2.00

All queens bred from hives making 300 pounds or over of honey. Shipped by express or parcel post, or come after your bees. Health certificate with each shipment.
FLOWERS BEE COMPANY Phone: Juno 4-2830 or 4-2837 **JESUP, GEORGIA, U.S.A.**

THREE-BANDED ITALIAN PACKAGE BEES AND QUEENS

Shipped anywhere in United States and Canada

1959 PRICES FOB HAMPTON, SOUTH CAROLINA

	Qns. ea.	2-lb. & Qn.	3-lb. & Qn.	4-lb. & Qn.	5-lb. & Qn.
1-24 Packages	$1.40	$4.25	$5.25	$6.25	$7.25
25-99 "	1.30	4.00	5.00	6.00	7.00
100 up "	1.20	3.75	4.75	5.75	6.75

(For Queenless Packages deduct $1.10)

Queens clipped and painted if desired. Health Certificate with each shipment.
Guaranteed safe arrival. Shipper rated in Dun & Bradstreet.

TERMS: One third with order, balance 15 days before shipment.

H. C. BRUNSON **P.O. Box 188** **HAMPTON, S. C.**
Phones: 2151 6111

THREE BAND and PURE ITALIAN HYBRID
Package Bees and Queens

We ship pure worker bees by mail, express, or truck—with queens introduced or not whichever you like. We guarantee live arrival.

1 9 5 9 PRICES
Each with a Young Laying Queen

Lots of	2 lbs.	3 lbs.	4 lbs.	5 lbs.
1 to 11, Each	$4.25	$5.35	$6.45	$7.55
12 to 29, Each	4.05	5.10	6.15	7.20
30 or More, Each	3.85	4.85	5.85	6.80

JACKSON APIARIES **P.O. Box 58** **Funston, Ga.**

QUEENS

ITALIANS CAUCASIANS

	1-24	25-99	100 up
Nice large queens	1.25	1.20	1.05

Clip and mark queens, 10c each, extra.

Queens May 25-31 ....$1.00 ea.
June through Sept. .... .75 ea.
If air mail, add 5¢ each queen.

For pkg. prices, see April issue.
Send us your order of 1 or 1000.

Mitchell's Apiaries

Bunkie, La.

MAY
Brings Spring Flowers
Time to Consider
CONNEAUT
60 lb. Cans
Ask Your Favorite Dealer
THE CONNEAUT CAN CO.
Conneaut, Ohio

HIGH QUALITY
Italian Queens and Package Bees
— Now Ready —

Improved 3-Band Italian Bees and Queens from top honey producing hives. Prompt service, safe arrival and satisfaction guaranteed.

Untested queens	$1.00
Tested queens	$2.00
2 lb. pkgs. w/q	3.50
3 lb. pkgs. w/q	4.50

Packages shipped F.O.B. Express or via Parcel Post collect.

NORMAN BEE CO.
A. D. NORMAN and SONS, Owners
Rt. 1 Ramer, Ala.

TALK TO BEEKEEPERS

(Continued from page 299)

manipulation as much as possible. We can make things difficult or we can make them simple.

At the time the colonies were divided, each occupied three deep supers.

I raised five combs of brood with adhering bees into a super above a double-screened inner cover. By double-screened I mean that the opening in the center of the inner cover was covered, top and bottom, with ordinary window screen. I put about three combs of honey and two empty combs into the super along with the brood. However, I did shake two or three combs of young bees into this super to make sure that the brood would be properly cared for. The laying queen was left in the lower compartment. A young laying queen was introduced to the bees above the inner cover and to help insure her safe introduction, I fed the bees some sugar syrup.

Naturally most of the old bees would return to the hive below. In order to make an entrance for the bees above, I simply pushed the hive back on the inner cover about a quarter of an inch, then nailed or tacked a small strip of wood over the opening at the back of the inner cover.

The object of putting double wire screen on the inner cover was to have the colony above, the same odor as the colony below, since the two divisions were to be united later. The upper colony or division would benefit from some of the heat from the bees below.

The divisions above the inner covers built up quite rapidly. In a comparatively short time they had brood in six or seven combs. The divisions below didn't seem to miss the bees that were taken away. The queens below seemed to lay a little faster, apparently to make up for the loss of brood that was taken away.

It was necessary shortly after the divisions were made to add more supers. We had a golden rocket honey flow in this vicinity right after the dandelion and fruit bloom honey flow.

When the major honey flow from clovers started a little after the middle of June, I united the upper and lower divisions. All I did was to remove the screened inner covers and throw the

(Continued on page 315)

THANKS

We are completely sold out of all bees and queens until June 1st. Will announce queen prices at that time.

Cloverline Apiaries

P.O. Box 5126 Columbia, S. C.

PACKAGE BEES AND QUEENS

PACKAGES WITH CAUCASIAN QUEENS	1 to 24	25 to 99	100 and Up
2-lbs.	$4.50	$4.25	$4.00
3-lbs.	5.60	5.35	5.10
EXTRA CAUCASIAN QUEENS	$1.45	$1.35	$1.25

PACKAGES WITH DADANT "MIDNITE" HYBRID QUEENS	1 to 24	25 to 99	100 and Up
2-lbs.	$4.80	$4.55	$4.30
3-lbs.	5.90	5.65	5.40
EXTRA MIDNITE QUEENS	$1.75	$1.65	$1.55

Queens Clipped and Marked, 10 Cents Each Additional

Howard Weaver & Sons Navasota, Texas

Pure Queen Bee ROYAL JELLY, $16 per ounce, $200 per pound, with directions on how to mix and take it with honey. We deliver by return AIR MAIL.

JACKSON APIARIES P.O. Box 58 Funston, Georgia

PACKAGE BEES ITALIAN QUEENS

Good Producers — Gentle
You will like them. Good service.

A. R. BANTA Los Molinos, Calif.

QUEENS and PACKAGES

	1 to 10	11 to 50	51 up
2-lb. pkg. with queen	$4.50	$4.25	$4.00
3-lb. pkg. with queen	5.70	5.45	5.20
Queens	1.45	1.35	1.25

All queens are No. 1 quality of our own breeding. Packages guaranteed to arrive full weight, or more. Larger packages at $1.20 per additional pound.
Tested queens, $2.50 each

W. E. PLANT Rt. 2 HATTIESBURG, MISS.

YORK'S Quality Bred
ITALIANS STARLINES MIDNITES

Packages with Italian Queens

Quantity	1-24	25-99	100 up
2 lb.	$4.50	$4.25	$4.00
3 lb.	5.70	5.45	5.20
4 lb.	6.90	6.65	6.40
5 lb.	8.10	7.85	7.60
Extra Queens Italian	1.45	1.35	1.25

Packages with Starline or Midnite Queens

Quantity	1-24	25-99	100 up
2 lb.	$4.80	$4.55	$4.30
3 lb.	6.00	5.75	5.50
4 lb.	7.20	6.95	6.70
5 lb.	8.40	8.15	7.90
Extra Queens — Starline or Midnite	1.75	1.65	1.55

Queenless packages — deduct $1.00 per package.
Tested Queens — add $1.00 per package or queen.
Queens Clipped 10¢. Clip and Mark 15¢ each additional.
Terms: Small orders cash, large orders $1.00 deposit per package and balance two weeks prior to shipping date.

FREE! If you have not received your copy of latest shipping information on parcel post, express, truck, and air freight shipments, write today. A copy will be sent by return mail.

STRAINS PREFERRED BY LEADING HONEY PRODUCERS

DADANT'S STARLINE HYBRIDS

ADOA

DADANT'S MIDNITE HYBRIDS

Typical truckload of packages

YORK BEE CO.
Jesup, Georgia
(The Universal Apiaries)
412 W. Orange St. P.O. Box 300
Phone Garden 7-4131

H. H. JEPSON CO. — 289 Congress St., Boston, Mass.
Supplying N. E. Beekeepers with A. I. Root products for over 50 years.
Boston Stock — Root Prices

CYPRESS BEE HIVES
AND BEEKEEPERS' SUPPLIES
MADE FROM "THE WOOD ETERNAL"
WRITE FOR FREE 1959 CATALOG
MYERS CRAFT MFG. CO. Burgaw, North Carolina

TALK TO
(Continued from
two division
upper divisi
nine combs
had brood i
booming co
or since. A
honey? The
shallow supe
There we
them could
proof of thi
panying pict
and the bee
one 10-story
in the pictu
Little Extra
For this
to be united
each divisio
screen 5" x
16" x ½"
I did not
clipped so
was the old
vived. I su
queens were
queens were
The meth
dividing col
on is the si
and involv
labor and
A Word of
It should
to attempt
dearth of
start robbin
ions will no
would durin
queens are
cepted.
On the
honey flow
thing with
The secre
onies in th
bloom and
nies with a
ing over wi
Where
crease it
three-story
then be u
colonies.

(Continued from page 312)

two divisions together. Some of the upper divisions had brood in eight or nine combs and the lower divisions had brood in around ten combs. Such booming colonies I never saw before or since. And did they put up surplus honey? They would practically fill a shallow super in three days.

There were so many bees that all of them could not get into the hives. As proof of this statement, see the accompanying picture of the sky-scraper hives and the bees lying out in front. I had one 10-story colony that does not show in the picture.

Little Extra Equipment Needed

For this method of dividing colonies to be united later, all that is needed for each division are two pieces of wire screen 5" x 2½" and one strip of wood 16" x ½" x ⅜".

I did not have my queens marked or clipped so I do not know whether it was the old or young queens that survived. I surmise however that the old queens were disposed of and the young queens were retained.

The method I have just described, of dividing colonies and uniting them later on is the simplest that I can think of and involves the very minimum of labor and equipment.

A Word of Warning

It should be said that it is inadvisable to attempt dividing colonies during a dearth of nectar. Bees are likely to start robbing and furthermore the divisions will not build up normally, as they would during a honey flow. Then too, queens are likely to be lost or not accepted.

On the other hand when there is a honey flow on you can do most anything with bees and get away with it.

The secret of success in dividing colonies in the spring during the fruit bloom and dandelion is to have colonies with an abundance of stores boiling over with bees.

Where divisions are made for increase it pays to winter colonies in three-story hives. The extra honey can then be used for making up more colonies.

(Continued on page 316)

Norman's BEES and QUEENS

"Home of Quality"

— Now Ready —

Try John A. Norman's Bright 3-Band Italian Bees and Queens. All orders appreciated and given prompt attention. Safe arrival, young laying queens, full weight packages, and satisfaction guaranteed. State health certificate furnished.

Untested queens	**$1.00**
Tested queens	**2.00**
2-lb. pkg. w/q	**3.50**
3-lb. pkg. w/q	**4.50**

Packages shipped F.O.B. Express or via Parcel Post, postage collect.

JOHN A. NORMAN

Grady, Alabama Rt. 1

THOSE GOOD WEAVER ITALIAN QUEENS

		After May 30th	
1 to 11	$1.40	1 to 99	$1.00
12 - 99	1.30	100 & up	.90
100 & up	1.25		

For clipping or marking add 5¢

WEAVER APIARIES

Navasota, Texas

BRITISH BEE JOURNAL

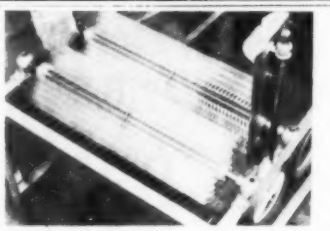
The Only FORTNIGHTLY Bee Journal in the World

Subscription price £1.1.0 per annum, post free, six months 11/6d. post free and three months 6/3d. post free.

Keep up to Date in Beekeeping by taking out a subscription now through our agents:

Gleanings in Bee Culture

Medina, Ohio



UNCAPPING MACHINE —
The uncapper that does the job in a jiffy — One stroke uncaps both sides of comb — No adjustoents to make — no heat required, the speeding brushes do the job, powered by a ¼ h.p. motor — fits over your uncapping tank.

SPECIAL OFFER

First 10 uncappers will be sold for $87.50 (motor not included) Shipped F.O.B., Luck, Wisconsin. Shipping weight about 55 lbs. The uncapper is guaranteed to do the work you expect it to do, if it doesn't, return it and the purchase price will be refunded. Order from this advertisement or write for more information.

F. A. KRUSE, Rt. 1, Luck, Wis.

No Matter What Your Interest

Whether you are a Commercial Beekeeper; a Sideline Beekeeper; or a Beginner Beekeeper,—you'll find what you want in ABJ. PLUS Science and Industry; Honey Plants; Meetings; Crops and Markets—AND your questions answered FREE.

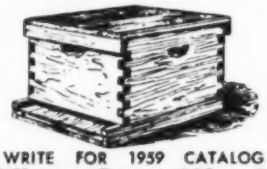
Send for a sample copy.

American Bee Journal
HAMILTON, ILLINOIS

Booking orders now.
Over 35 years a shipper.
Send for FREE Circulars.

BLUE BONNET APIARIES also HOME of AULT BEE FARMS
Weslaco, Texas

BEE SUPPLIES



WRITE FOR 1959 CATALOG
Williams Bros. Mfg. Co.
5205 SE 82 AVENUE
PORTLAND 66, ORE.

TALK TO BEEKEEPERS

(Continued from page 315)

Not Every Year Like 1955

If all beekeepers got good crops every year, what would happen to the honey market? Perhaps it would be a good thing, because we would then have to do something about marketing. At present we do not seem to take the marketing problem seriously. If we sell or get rid of the comparatively small amount of honey we produce, perhaps we think we are lucky. We should not look at the matter that way.

One trouble with honey marketing is that comparatively few people know enough about honey to realize that it is a healthful sweet and therefore the demand for our product is limited. Not until a sufficient amount of money is available to publicize the virtues of honey in a large way, will the demand for honey increase. The American Honey Institute is doing a marvelous piece of work in promoting the use of honey, but the Institute cannot do more until its budget is increased.

About Putting on Supers

It is better to put on too many supers rather than too few. This is especially true during the time bees are building up in the spring. They need room for storage of incoming nectar and pollen, also for brood rearing. If colonies become congested they are likely to start building queen cells and if these cells are allowed to mature, swarms are likely to issue at the time the cells are capped over. It pays, therefore, to keep colonies well supered. When the honey flow is tapering off, the bees should be permitted to fill the supers that are already on the hives.

Beginners should be told that it is a mistake to put supers containing frames with full sheets of foundation on colonies during a dearth of nectar, or when the honey is coming in rather slowly. During such a time bees are likely to chew holes in the full sheets of foundation. It is all right to put on extracting supers with drawn combs during a partial dearth of nectar, or during a temporary cessation of a honey flow just prior to the main honey flow.

(Continued on page 319)

ITALIAN. . . . "GULF BREEZE". . . . QUEENS

Refer to our April ad for package prices. Good GULF BREEZE queens available in any quantity at the following prices after May 10th.

1-9 . . . . . $1.30 each 10-49 . . . . . $1.20 each 50 or more . . . . . $1.00 each

Clipping and painting 5¢ each.

BESSONET BEE COMPANY **Donaldsonville, La.**

When you think of

Bees & Queens

Think of:

Merrill Bee Co.

P. O. Box 115
State Line, Miss.

With normal weather all orders should go out on time as our bees are in good condition.

Our 100% satisfaction has been good for 47 years, let us prove it.

Packages with Queens (Italian only).

2 - lb. pkg.	**$3.75 any number**
3 - lb. pkg.	**4.75 any number**
Untested Queens	**1.10 any number**
Tested Queens	**1.50 any number**
For larger pkgs. add	**1.00 per lb.**

Terms $1.00 per package with orders balance before shipments.

Produce more Honey with Dadant Starline Hybrid Queens and Garon's Better Quality Italians

	QUEENS			Package Bees & Queens		
	Starlines		Italians	2 lb.	3 lb.	4 lb.
1-24	$1.70	—	$1.30	$4.05	$5.05	$6.05
24-99	1.60	—	1.25	3.95	4.95	5.95
100-up	1.50	—	1.20	3.85	4.85	5.85

DADANT'S STARLINE HYBRIDS

Reg. U. S. Pat. Off.

For packages with Dadant Starline Hybrid Queens add 30¢ extra per package.

Queens clipped or painted at 5¢ each.

EFFECTIVE MAY 20th — 25¢ DEDUCTION ALLOWED ON ITALIAN QUEENS

GARON BEE CO. **Donaldsonville, La.**

JENSEN'S QUEENS

Have stood the test of time. Backed by nearly a half century of queen rearing skill. They possess the qualities most in demand by most beekeepers, whether commercial or small scale.

We are booked up for package bees this season. But we are specializing in queens, both Dadant Starline Hybrids and our old line Magnolia State Italians.

Starlines — Prices —		Magnolias	
1-24	$1.75	1-24	$1.45
25-99	1.65	25-99	1.35
100-up	1.55	100-up	1.25

DADANT'S STARLINE HYBRIDS

Reg. U. S. Pat. Off.

Price reductions effective June 1st.

JENSEN'S APIARIES **MACON, MISSISSIPPI**

BEES AND QUEENS

Caucasians or Italians

We are very sorry that we could not handle all the orders for Bees and Queens that were sent us for April but we should be able to handle any promptly after May 20th.

REDUCED PRICES AFTER MAY 20th

In lots of	Queens	2 lb. & Q.	3 lb. & Q.	4 lb. & Q.	5 lb. & Q.
1 - 24	$1.00	$3.75	$4.50	$5.40	$6.35
25-499	.85	3.35	4.20	5.05	6.00

Tested queens . . . . . $2.00 each

THE STOVER APIARIES

Mayhew, Miss.

ORDER NOW
FOR JUNE DELIVERY
2-lb. pkg. w/q $4.00
3-lb. pkg. w/q 5.00
Queen, mild Italian ... 1.25
Queen, tested & marked 2.00
Royal Jelly by contract, Cells
NASSAU BEE CO.
Rt. 1, Box 110, Hilliard, Fla.

Italian Queens
EUGENE WALKER
Rt. 2, Box 982
Live Oak, California

WILLIAMS ITALIAN QUEENS
LARGE LEATHER COLORED
THREE-BANDED
QUALITY SUPREME
CERTIFICATE WITH EACH SHIPMENT
1-9 Postpaid $1.25
10-99 Postpaid 1.15
100-up Postpaid 1.05
DR. WILLIAMS APIARIES
115 W. Sterling Ave. Baytown, Texas

ITALIAN BEES & QUEENS
3 lb. with queen $4.20
4 lb. with queen 5.10
Extra queens 1.15
For queenless pkg. deduct price of queen.
Live delivery and health certificate guaranteed. 10% cash books your order.
DAIGREPONT APIARIES
HESSMER, LA.

CAUCASIAN OR ITALIAN PACKAGE BEES AND QUEENS
Proven for honey production, easy handling, health certificate, live arrival guaranteed and top quality.
— PRICES —

Lots of	Queens	2-lb. & Q.	3-lb. & Q.	4-lb. & Q.	5-lb. & Q.
1-24	$1.50	$4.25	$5.35	$6.45	$7.55
25-99	1.35	4.00	5.05	6.10	7.15
100-up	1.20	3.75	4.75	5.75	6.75

Ship via Express or Parcel Post
FARRIS HOMAN - - - - - - - - - - - - - - SHANNON, MISS.

TALK TO
(Continued fro

If a Swarm

If you se
move the h
comes, onto
ten feet awa
for the sw
then put th
that are in
hive on the
crease the
taining the
was on the
a new stan
bees that w
stand. How
a comparat
young layi
store enoug
The hive co
parent stan
surplus hon
swarm is hi
main honey

LIVE AND
(Continued fro

a week by
ages, I do
more than
together.

It was a
I got them.
them, and
outlined in
ing packag
bear the t
wet with t
would be
would they
together an
the side of
in like so
hive and th
later, they
I haven't
report later

The N
The Qu
National
of New
ing—Bet
tion, 8 s

TH
Box

TALK TO BEEKEEPERS

(Continued from page 316)

If a Swarm Comes Out, What Then?

If you see a swarm issue you should move the hive from which the swarm comes, onto a new hive stand at least ten feet away and place a hive intended for the swarm on the parent stand, then put the swarm into it. The bees that are in the fields will fly into the hive on the parent stand and thus increase the population of the hive containing the swarm. The colony that was on the parent stand now occupying a new stand will lose some of its old bees that will drift back to the parent stand. However, this colony should, in a comparatively short time, have a young laying queen and will usually store enough honey for winter food. The hive containing the swarm on the parent stand is likely to put up some surplus honey, provided, of course, the swarm is hived at the beginning of the main honey flow.

LIVE AND LEARN

(Continued from page 290)

a week by express. In the six packages, I don't think that there were more than a cupful of dead bees altogether.

It was a cold, raw, windy day when I got them. Usually I feed them, soak them, and go through the motions as outlined in the instructions for installing packages. This time I couldn't bear the thought of getting them all wet with the feed. I figured that I would be uncomfortable, and so would they. They were all huddled together anyway, so I just ripped off the side of the package, dumped them in like so many oats, closed up the hive and there they were. Three days later, they were going great guns, and I haven't looked at them since. Will report later.

The New Zealand Beekeeper
The Quarterly Magazine of the National Beekeepers' Association of New Zealand. Better Beekeeping—Better Marketing. Subscription, 8 shillings per year, payable to
THE GENERAL SECRETARY
Box 19 Foxton, New Zealand

"The Australian Bee Journal"
Published by the Victorian Apiarists' Association at the beginning of each month. Subscription 10/-per annum plus 2/6 postage to overseas countries.
Box 167, Rainbow, Victoria, Australia

ITALIAN BEES & QUEENS

2-lb. pkg. w/q	$3.50
3-lb. pkg. w/q	4.25
4-lb. pkg. w/q	5.20
5-lb. pkg. w/q	6.25
Extra queens after May 15th	1.00

Live delivery guaranteed and health certificate with each shipment.
10% books your order.
GASPARD BEE CO. Hessmer, La.

HARPER'S FAMOUS
High Quality Italian
QUEENS & PACKAGE BEES

	Queens	2-lb. w/q	3-lb. w/q
1 to 29	$1.25	$4.00	$5.00
30 & up	1.15	3.75	4.75

Please let us have your requirements Now. We still have some open shipping dates for first part of April also latter part. Live Arrival and Health Certificate Guaranteed.

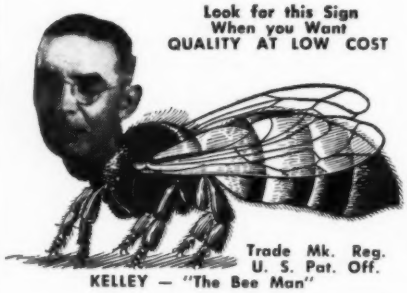
CARLUS T. HARPER
New Brockton, Ala.

REAL ITALIAN HONEYBEES
preserved in clear plastic

Cuff links & tie pin set	$3.95
Earings	1.95
Pendant	1.50
Brooch	1.69

add 10% federal tax

WILDERS APIARIES
345 Central Ave.
Johnston, R. I.



KELLEY — "The Bee Man"

KELLEY'S BEES

Improved three-banded Italian bees and queens direct from our own farm. Shipments start April 1st, express or parcel post shipment. Thousands of extra queens.

	Queens	2-lb. w/q	3-lb. w/q
1-24	$1.25	$4.25	$5.25
25-99	1.20	4.00	5.00
100-up	1.15	3.75	4.75

THE WALTER T. KELLEY CO.

Clarkson, Ky.

Index to Display Advertisers

Aeppler Co., C. W. 309
Alamance Bee Company 307
American Bee Journal 316
Anderson & Son, O. K. 305
Australian Bee Journal 319
Baker's Apiaries 309
Banta, A. R. 313
Berry & Sons, M. C. 303
Bessonet Bee Co. 317
Blue Bonnet Apiaries 316
Brunson, H. C. 311
Burleson & Son, T. W. 305
British Bee Journal 315
Calvert Apiaries 304
Canadian Bee Journal 305
Carbolineum Wood Preserving Co. 260
Cary Corp., M. R. 258
Chrysler & Son, W. A. 258
Cloverline Apiaries 313
Coffey Apiaries 305
Conneaut Can Co. 312
Dadant & Son, Inc. ..... Inside front cover
Daigrepont Apiaries 318
Daniels & Co., R. C. 262
Faske, A. W. 310
Flowers Bee Co. 311
Froehner, L. E. 305
Garon Bee Co. 317
Gaspard Bee Co. 319
Harper, Carlus T. 319
Homan, Farris 318
Homan, Holder 303
Hutchison Mfg. Co. 260
Hyland Apiaries, Inc. 311
Jackson Apiaries 311, 313
Jensen's Apiaries 317
Jepson Co., H. H. 314
Jones & Son, F. W. 260
Kelly Co., Walter T. 259, 320
Kruse, F. A. 316
Leverette Apiaries, Walter D. 306
Little's Apiaries 304
Lotz Co., August 258
McFarling, Raymond 305
McVay, J. F. 307
Merrill Bee Co. 317
Mitchell's Apiaries 312
Myers Craft Mfg. Co. 314
Nassau Bee Co. 318
New Zealand Beekeeper 319
Norman Bee Co. 312
Norman Bros. Apiaries 306
Norman, John A. 315
Plant, W. E. 313
Prairie View Honey Co. 258
Reams, W. D. 303
Root Co., A. I. ..... Back covers
Rossman Apiaries 306
Shackelford, John S. 307
Smith & Son, Geo. E. 309
Stewart Taylor 259
Stoller Honey Farms 260
Stover Apiaries 318
Strachan, Don J. 304
Walker, Eugene 318
Wally's Bee Enterprise, Inc. 260
Wax Workers, Inc. 310
Weaver Apiaries 315
Weaver & Sons, Howard 313
White Pine Bee Farms 307
Wilbanks Apiaries 259
Wilders Apiaries 319
Williams Apiaries, Dr. 318
Williams Bros. Mfg. Co. 316
Woodman Co., A. G. 260
York Bee Co. 314